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# Administration Report of the Public Works Department in the Bombay Presidency for the Year 1932-33

With a detailed review of the Civil and Military Works

[Price—Rs. 2 As. 8 *or* 4*s*. 6*d*.]

BOMBAY
PRINTED AT THE GOVERNMENT CENTRAL PRESS
1934

Obtainable from the Superintendent, Government Printing and Stationery, Bombay, or through the High Commissioner for India, India House, Aldwych, London, W.C.2, or through any recognized Bookseller

gitized with financial assistance from th
Government of Maharashtra
on 22 July, 2017

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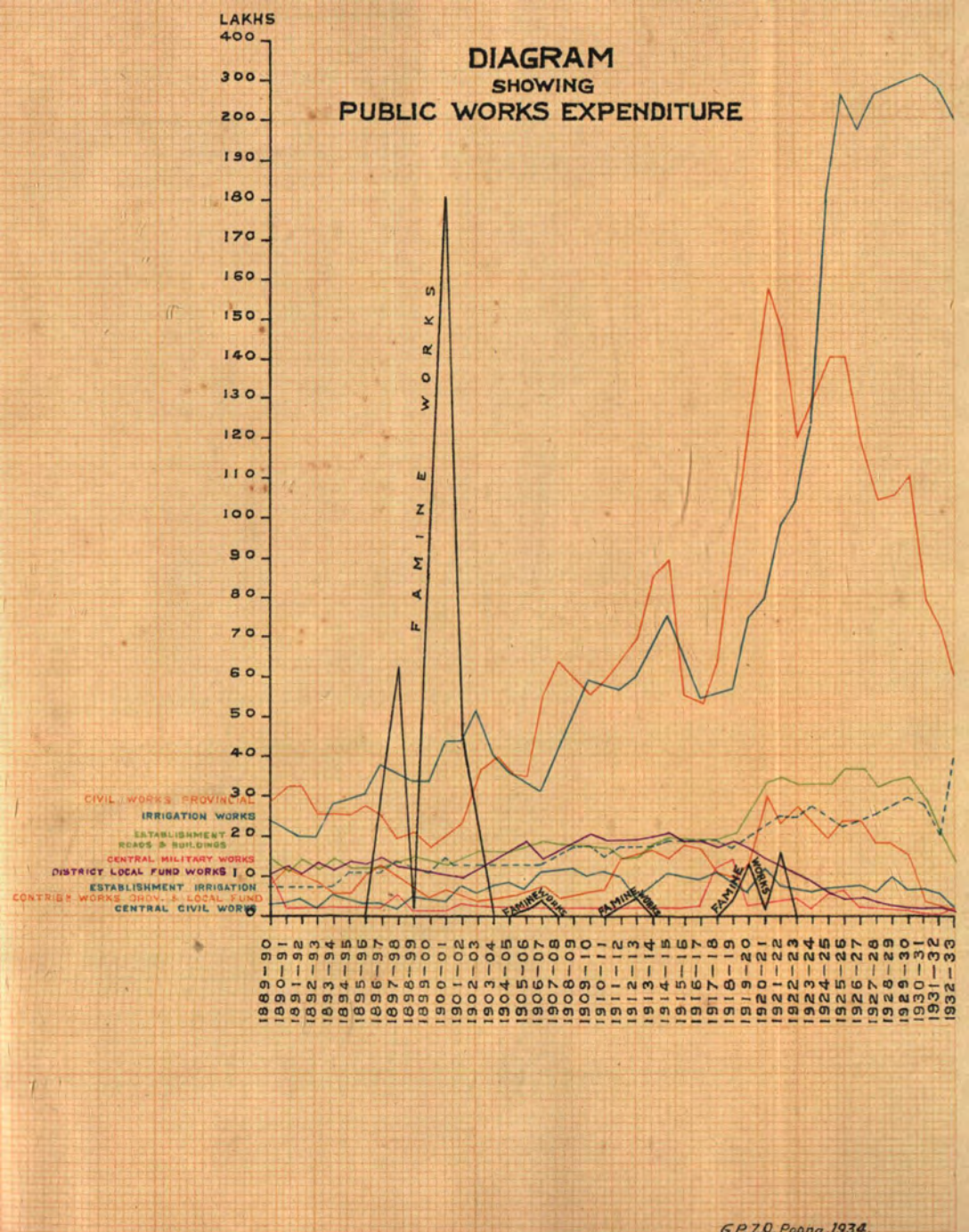



G.P.Z.O. Poona, 1934.

(L) G.P.Z.O. Poona, 1934.

# DIAGRAM

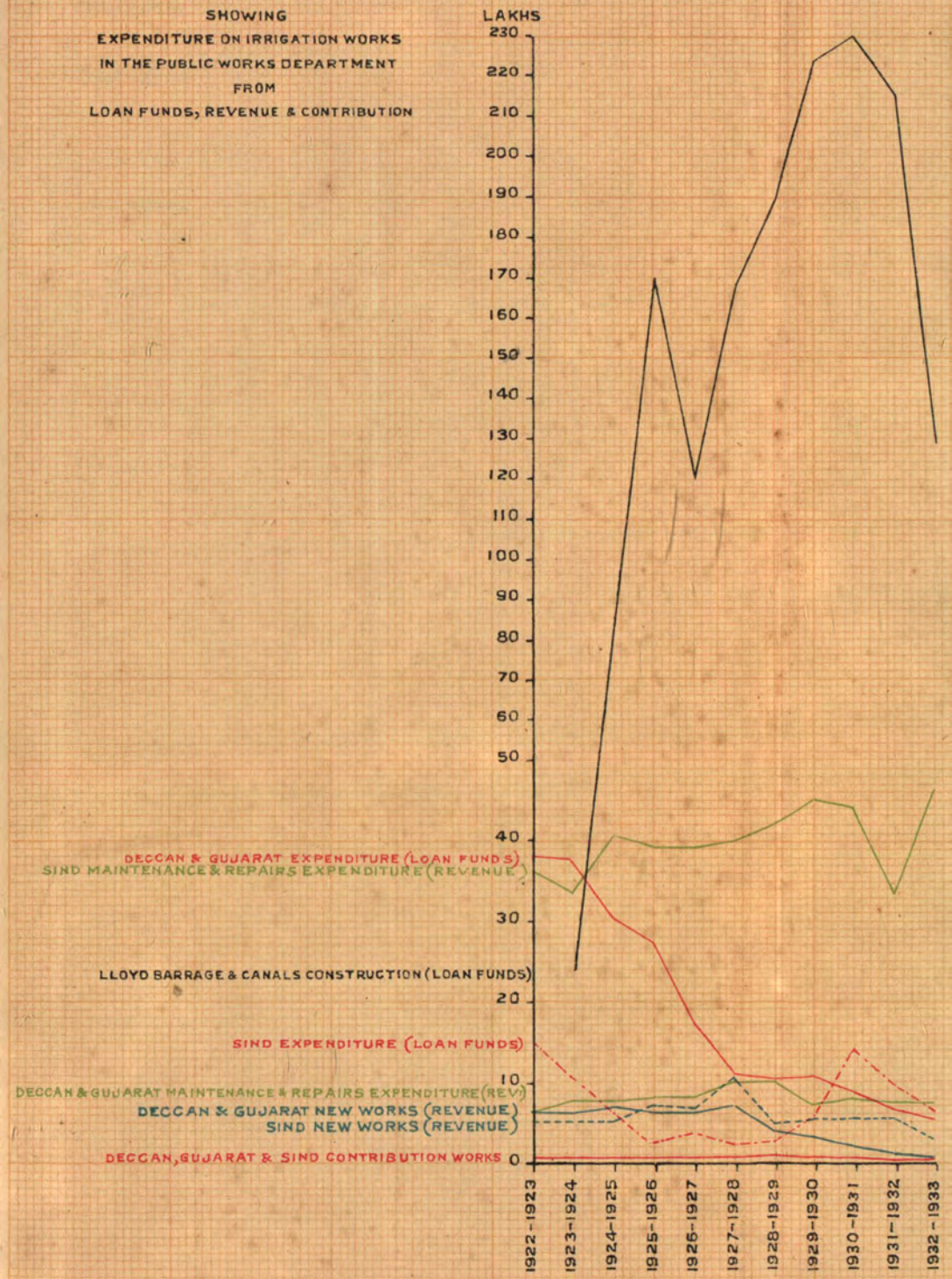
SHOWING

EXPENDITURE ON IRRIGATION WORKS

IN THE PUBLIC WORKS DEPARTMENT

FROM

LOAN FUNDS, REVENUE & CONTRIBUTION

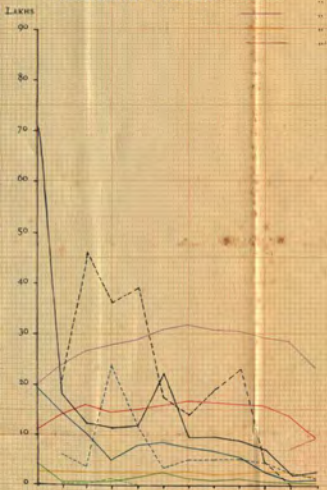



G.P.Z.O. Poona. 1934.

# DIAGRAM SHOWING EXPENDITURE ON PROVINCIAL BUILDINGS AND ROADS IN THE PRESIDENCY PROPER AND SIND.

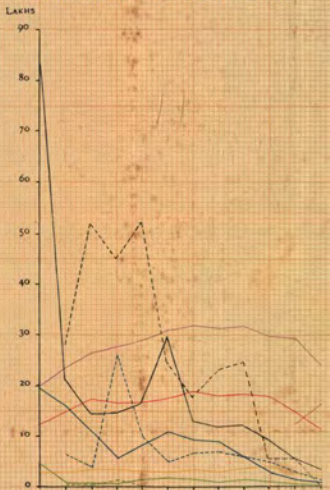
Represents 41 C.W. Expenditure on Buildings for Original Works.
" 60 " " " " " "
" 41 " " " " " Maintenance.
" 41 " " " Metalled Provincial Roads for Original Works
" 60 " " " " " " " "
" 41 " " " Unmetalled " " " "
" 60 " " " " " " " "
" 41 " " " Metalled " " Maintenance.
" 41 " " " Unmetalled " " " "
" 41 " " from Development Fund Provincial Roads for — Original Works.

## PRESIDENCY PROPER.




## SIND.

## DIAGRAM SHOWING TOTAL EXPENDITURE IN THE PRESIDENCY PROPER AND SIND.

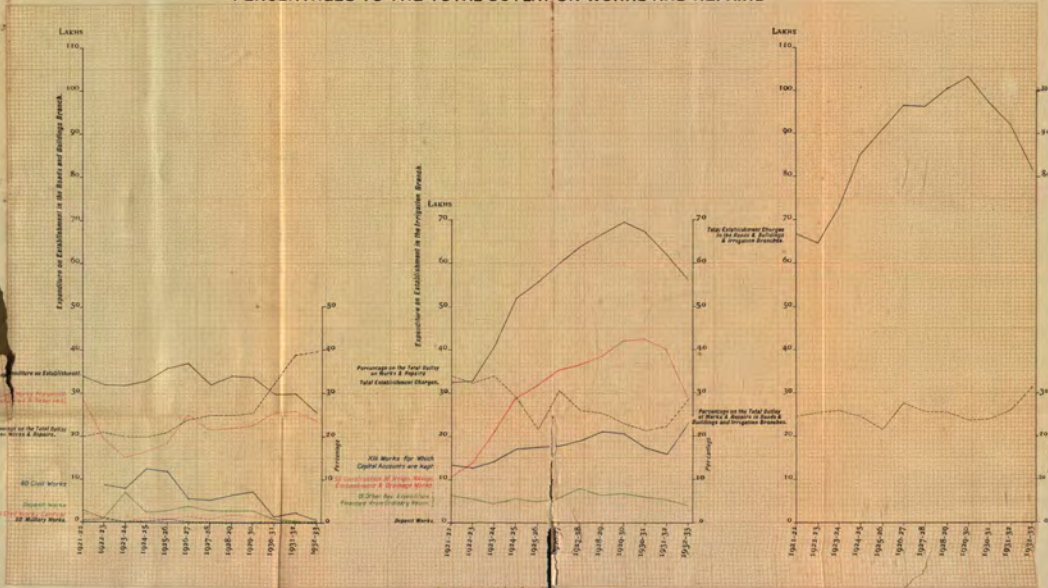



G.P.Z.O. Poona, 1934.

# DIAGRAM SHOWING THE EXPENDITURE ON D.L.B. ROADS IN THE PRESIDENCY PROPER AND SIND.

(ORIGINAL WORKS AND REPAIRS)

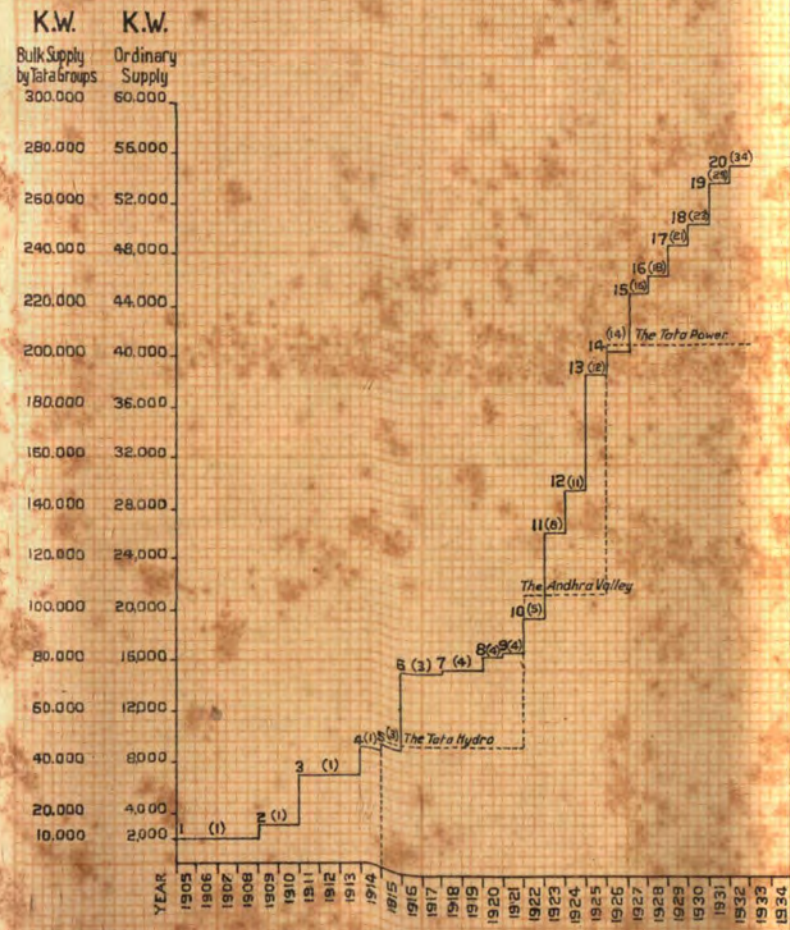
# DIAGRAM SHOWING EXPENDITURE
ON ESTABLISHMENT
IN THE
## ROADS & BUILDINGS & IRRIGATION BRANCHES
OF THE
## PUBLIC WORKS DEPARTMENT
AND
## PERCENTAGES TO THE TOTAL OUTLAY ON WORKS AND REPAIRS


Lakhs
Expenditure on Establishment in the Roads and Buildings Branch.
Total Expenditure on Establishment
Percentages on the Total Outlay on Works & Repairs.
Percentage
Lakhs
Expenditure on Establishment in the Irrigation Branch.
Percentages on the Total Outlay on Works & Repairs Total Establishment Charges.
XIII Works for Which Capital Accounts are kept
Percentage
Lakhs
Total Establishment Charges in the Roads & Buildings & Irrigation Branches
Percentages on the Total Outlay on Works & Repairs in Roads & Buildings and Irrigation Branches.
Percentage

Govt. Photozincographic Dept., Poona, 19

# GRAPH
## SHOWING THE PROGRESS OF ELECTRICAL DEVELOPMENT IN TERMS OF KILOWATTS INSTALLED FROM 1905 TO DATE BY VARIOUS SUPPLY COMPANIES IN THE BOMBAY PRESIDENCY

NOTE:— Dotted line shows Tata Groups Bulk Power Supply.
Full line shows total of ordinary Supply.
Figures in Brackets, thus (4) show the number of Companies, excluding the Tata Groups in operation at the end of each year.




| INCREASE DUE TO | | |
|---|---|---|
| Ref. No | Increase of load old Supply Co: | Start of new Supply Co |
| 1 | | Bombay El. S.T. |
| 2 | Bombay El. S.T. | |
| 3 | Bombay El. S.T. | |
| 4 | Bombay El. S.T. | |
| 5 | | Ahmedabad Karachi |
| 6 | Bombay El. S.T. | |
| 7 | Ahmedabad | Poona |
| 8 | Ahmedabad Karachi Poona | |
| 9 | Karachi | |
| 10 | Bombay El. S.T. Poona | Surat |
| 11 | Bombay El. S.T. Ahmedabad Poona | Godhra Hyderabad Sukkur |
| 12 | Ahmedabad Karachi Poona Hyderabad Sukkur | Broach Gadag and Belgeri. Shikarpur |
| 13 | Bombay El. S.T. Ahmedabad Poona Hyderabad | Sholapur |
| 14 | Poona Sukkur Broach | Rander Aden |
| 15 | Bombay El. S.T. Poona Surat Hyderabad Sukkur | Bhiwandi Hubli |
| 16 | Karachi Surat | B'bay Suburn Thana |
| 17 | Bombay El. S.T. Surat Hyderabad Broach Shikarpur B'bay Suburn | Lonavla – Khandala Kalyan Bijapur |
| 18 | Poona Sukkur Rander B'bay Suburn | Panvel Dharwar |
| 19 | Bombay El. S.T. B'bay Suburn Bhiwandi Ahmedabad Godhra Panvel | Pandharpur Panchagani Matheran Larkhana Jalgaon Nasik-Deolali |
| 20 | B'bay Suburn Kalyan Rander Pandharpur Bijapur Matheran Sukkur (Reducte) | Dhulia Ahmednagar Amalner Nadiad Belgaum |

Executive Engineer El: Dte & Electrical Inspector, Bombay
in charge of the duties of the Electrical Engineer to Govt.
P.W.D. Bombay.

G.P.-Z.O.POONA.1933.

PUBLIC WORKS DEPARTMENT.

BOMBAY PRESIDENCY

# ADMINISTRATION REPORT WITH A DETAILED REVIEW OF THE CIVIL AND MILITARY WORKS FOR 1932-33.

## I—DIRECTION.

During the year under report Mr. C. M. Lane, I.S.E., continued as Chief Engineer (Irrigation) and Secretary to Government and Mr. P. L. Bowers, C.I.E., M.C., A.M.Inst.C.E., as Officiating Chief Engineer (Roads and Buildings) and Joint Secretary to Government.

The post of the Joint Chief Engineer in Sind, which was created as a provisional measure in December 1931, was abolished as a measure of retrenchment with effect from 31st March 1933 (afternoon).

## II—ADMINISTRATIVE MEASURES.

2. On the retirement of Mr. R. Haines, I.S.E., on 8th November 1932, Mr. A. B. Spencer, L.C.E., I.S.E., was promoted Superintending Engineer, permanent, and Mr. N. B. Baxter, I.S.E., Superintending Engineer, provisionally permanent.

On the results of the competitive examination held by the Public Service Commission, two appointments were made to the India-recruited Branch of the Indian Service of Engineers. No appointment was made to the Europe-recruited Branch of the Service during the year.

Three graduates from the College of Engineering, Poona, and the N. E. D. Civil Engineering College, Karachi, were appointed as candidates to the Bombay Service of Engineers and 4 promotions were also made to that service from the Bombay Subordinate Engineering Service, permanent Supervisors and temporary Engineers.

## III—TERRITORIAL CHANGES.

3. The continuance of the following temporary divisions was sanctioned upto the dates mentioned against each :—

| | |
|---|---|
| Malsiras Division | .. 15th April 1933. |
| Mutha Canals Division | .. 15th April 1933. |
| Special Irrigation Division | .. 30th November 1933. |
| Barrage Division .. | .. 28th February 1934. |

4. The Public Works Department charge of the Satara Division was closed down with effect from 1st June 1932 as a temporary measure of

retrenchment and this charge (in abeyance) has been amalgamated with the Poona and Sholapur Divisions.

The Poona Water Works Division and the office of the Executive Mechanical Engineer and Works Manager, Government Central Stores, Workshop and Training Centre, Dapuri, were placed under the administrative control of the Superintending Engineer, Central Circle, with effect from 1st September 1932.

Arising out of the recommendations of the Reorganisation Committee, the following orders were passed :—

(*a*) The Irrigation Development and Research Circle was closed with effect from the 12th March 1933 and the Special Irrigation Division and the Nira Left Bank Canal Division of that Circle transferred to the Deccan Irrigation Circle with effect from the same date.

*1. Malsiras Division.
2. Mutha Canals Division.
3. Nira Left Bank Canal Division.
4. Special Irrigation Division.

(*b*) The marginally* noted four Divisional charges in the Deccan were rearranged so as to form the following three enlarged Divisions with effect from the 15th April 1933 :—

| Divisions. | Head-quarters. | Works in charge. |
|---|---|---|
| 1. Nira Right Bank Canal Division. | Malsiras .. | Nira Right Bank Canal, head to tail, Lloyd Dam and Lake Whiting. |
| 2. Poona Irrigation Division. | Poona .. | Mutha Right and Left Bank Canals, Khadakwasla Dam and Lake Fife in addition to the works of the existing Nira Left Bank Canal Division. |
| 3. Irrigation Research Division. | Poona. .. | Research and experimental works connected with development of Deccan Irrigation. |

The Effluent Sub-division, the Block Officer and his staff and the work of drainage construction and maintenance of the Godavari, Pravara and Nira Left Bank Canals remained in the Irrigation Research Division till the 30th April 1933 and thereafter they were transferred to the several Divisions as detailed below :—

1. Effluent Sub-division .. To the Poona Irrigation Division.
2. The Block Officer and his staff. To the Ahmednagar Division.
3. Work of drainage construction and maintenance of the Godavari, Pravara and Nira Left Bank Canals. To the Divisions concerned.

(*c*) The Poona Irrigation Division, originally so designated but subsequently changed to the Nira Left Bank Canal Division, was already a permanent charge. The formation of other two enlarged Divisions, viz., Nira Right Bank Canal Division and Irrigation Research

Division, was sanctioned on a temporary basis from the 15th April 1933 to the 28th February 1934.

The Lloyd Barrage Circle and its marginally* noted Divisions were abolished with effect from the 28th April 1932. A new temporary Division, designated the Plant Division, with headquarters at Sukkur, was formed for one year with effect from the 28th April 1932, under the direct control of the Chief Engineer in Sind.

* Right Works Division.
Left Works Division.
River Works Division.
Transport and Supply Division.
Power Supply Division.

The Barrage Division, with headquarters at Sukkur, was also opened on a temporary basis with effect from 28th April 1932 to 28th February 1934 under the Superintending Engineer, Northern Sind Circle.

The following Divisions in Sind were given local nomenclature as below :—

*Rohri Canal Circle.*

| Old name. | New name. |
|---|---|
| No. I Division, Rohri Canal | .. Rohri Division. |
| No. II Division, Rohri Canal | .. Nasrat Division. |
| No. III Division, Rohri Canal | .. Dad Division. |
| No. IV Division, Rohri Canal | .. Hala Division. |

*Southern Sind Circle.*

| | |
|---|---|
| No. V Division, Rohri Canal | .. Nasir Division. |
| No. VI Division, Rohri Canal | .. Hyderabad Division. |

*Sub-Divisions.*

5. The continuance of the following sub-divisions was sanctioned up to the dates mentioned against each :—

*Malsiras Division.*

| | |
|---|---|
| Malsiras, Velapur and Mohad Sub-Divisions. | 15th April 1933. |

*Mutha Canals Division.*

| | |
|---|---|
| Mutha Canals, Minor Tanks, Bhatgar and Phaltan Sub-Divisions. | 15th April 1933. |

*Special Irrigation Division.*

| | |
|---|---|
| Effluent Farm Development, Baramati Development, Kopargaon Development, Mutha Right Bank Canal Development and Baramati Experimental Salt Area Sub-Divisions. | 30th November 1933. |

The Mayani, Satara and Karad Sub-Divisions of the Satara Division were transferred, the first to the Sholapur Division and the remaining two to the Poona Division, with effect from 1st June 1932.

The Bombay Government House Sub-Division of the Poona Division was transferred to the Presidency Division of the Northern Circle with effect from 1st June 1932.

The Kanara Irrigation Sub-Division in the Kanara Division was closed down and amalgamated with the Sirsi, Haliyal and Karwar Sub-Divisions with effect from 1st July 1932.

The " B " Sub-Division of the Presidency Division was amalgamated with the " D " Sub-Division of the same Division with effect from 1st October 1932.

The Andheri Sub-Division of the Thana Division was amalgamated with Thana Sub-Division of the same Division with effect from 1st October 1932.

The Ankleshwar Sub-Division of the Surat and Broach Division was abolished and its sub-charges were distributed between the Broach and Surat City Sub-Divisions of the same Division with effect from the 1st October 1932.

The Dohad Sub-Division of the Kaira and Panch Mahals Division was abolished and merged in the Godhra Sub-Division of the same Division with effect from the 15th November 1932.

* 1. Gujarat Sanitary Sub-Division.
2. Khandesh Sanitary Sub-Division.
3. Sholapur Sanitary Sub-Division.
4. Belgaum Sanitary Sub-Division.

The marginally* noted 4 Sanitary Sub-Divisions were abolished, the works thereunder being transferred to the Executive Engineers of Divisions in whose jurisdiction they fall.

*Sind.*

The following Sub-Divisions were opened and abolished, respectively, during the year 1932-33 in Sind :—

*Sub-Divisions opened.*

| Name of Sub-Division. | Name of Division. | Date of opening. |
|---|---|---|
| 1. Mirwah .. | Southern Jamrao Division .. | 8th April 1932. |
| 2. Regulation .. | Barrage Division .. | 28th April 1932. |
| 3. Roads and Bunds .. | Barrage Division .. | 28th April 1932. |
| 4. Workshop .. | Plant Division. .. | 28th April 1932. |
| 5. Sukkur .. | North Western Canal Division. | 1st June 1932. |
| 6. Sehra .. | Rohri Division (Formerly No. I Division, Rohri Canal). | 12th June 1932. |
| 7. Shahpur .. | Nasrat Division (Formerly No. II Division, Rohri Canal). | 13th June 1932. |
| 8. Naushahro .. | Dad Division (Formerly No. III Division, Rohri Canal). | 1st July 1932. |
| 9. Drainage .. | Rohri Division .. | 28th March 1933. |
| 10. Jhol .. | Northern Jamrao Division .. | 1st April 1932. |

*Sub-Divisions closed.*

| Name of Sub-Division. | Name of Division. | Date of closure. |
|---|---|---|
| 1. Machines .. | Khirtar Division .. | 20th April 1932. |
| 2. No. I Sub-Division .. | Right Works Division .. | 27th April 1932. |
| 3. No. I Sub-Division .. | Left Works Division .. | 27th April 1932. |
| 4. Stores .. | Transport and Supply Division. | 27th April 1932. |
| 5. Workshop .. | Power Supply Division .. | 27th April 1932. |
| 6. Bagarji-Ruk .. | North Western Canal Division. | 31st May 1932. |
| 7. Watercourses .. | Khirtar Division .. | 31st May 1932. |
| 8. Watercourses .. | Warah Division .. | 31st May 1932. |
| 9. Gambat .. | Rohri Division (Formerly No. I Division, Rohri Canal). | 31st May 1932. |
| 10. No. IV Sub-Division .. | Nasrat Division (Formerly No. II Division, Rohri Canal). | 11th June 1932. |
| 11. No. V Sub-Division .. | Nasrat Division (Formerly No. II Division, Rohri Canal). | 30th June 1932. |
| 12. Haberi .. .. | Dad Division (Formerly No. III Division, Rohri Canal). | 30th June 1932. |
| 13. Phul .. .. | Dad Division (Formerly No. III Division, Rohri Canal). | 30th June 1932. |
| 14. Watercourses .. | Dad Division (Formerly No. III Division, Rohri Canal). | 30th June 1932. |
| 15. No. V Sub-Division .. | Southern Dadu Division .. | 15th July 1932. |
| 16. No. VI Sub-Division .. | Southern Dadu Division .. | 15th July 1932. |
| 17. Construction .. | Karachi Canals Division .. | 30th September 1932. |
| 18. Hala Sub-Division .. | Hala Division (Formerly No. IV Division, Rohri Canal). | 1st October 1932. |
| 19. Hyderabad .. | Fuleli Canals Division .. | 31st October 1932. |
| 20. Khairpur .. | Rohri Division (Formerly No. I Division, Rohri Canal). | 31st December 1932. |
| 21. "C" Sub-Division .. | Hala Division (Formerly No. IV Division, Rohri Canal). | 31st March 1933. |

One hundred and four Sub-Divisions continued in operation in Sind on 31st March 1933.

*Miscellaneous.*

6. As a measure of retrenchment the Quantity Surveyors' Branch under the Consulting Architect to Government was abolished with effect from 1st April 1932.

As the question of the complete reorganisation of the Public Works Department was under consideration, the guarantee of direct appointments to the Bombay Service of Engineers and to the Bombay Subordinate Engineering Service given to the College of Engineering, Poona, and the N. E. D. Civil Engineering College, Karachi, was suspended as a provisional measure from the year 1932.

Promotions heretofore made to the Bombay Service of Engineers—one from the Bombay Subordinate Engineering Service and two from permanent Supervisors and temporary Engineers—were stopped from the year 1933.

A temporary appointment (equivalent to a Divisional charge) of a Special Officer attached to the office of the Chief Engineer in Sind was created for a period of six months in the first instance, with effect from 16th October 1932, for the compilation of the completion report of the Lloyd Barrage and Canals Construction Project and Mr. J. L. Grant, I.S.E., was appointed to hold it.

Mr. A. M. Macmillan, C.I.E., I.C.S., was appointed an officer on Special Duty in the Public Works Department for the short period of 8 days, with effect from 3rd November 1932, for completing the work on which he had been engaged of revision of the Bombay Canal Rules, 1922.

In view of the recommendations of the Reorganisation Committee, the Public Health Branch was reduced to a consultant branch with effect from 1st March 1933, the executive side of its functions being transferred to the Public Works Department Divisions concerned. As a consequence of this change, the post of the Superintending Engineer, Public Health, previously held in abeyance, was abolished with effect from 1st March 1933 and replaced with effect from that date by the post of Consulting Public Health Engineer to Government with the status of an Executive Engineer.

## IV—DETAILED REVIEW.

### A—Civil Buildings.

During the year under review the Roads and Buildings Branch of the Public Works Department of the Presidency executed works involving a total expenditure of Rs. 99,20,321. The more important details of expenditure under the various heads are given below :—

*Central Services.*

| | | Rs. |
|---|---|---|
| *Customs*— | | |
| On works .. .. .. .. | | 1,412 |
| On repairs .. .. .. .. | | 37,578 |
| | Total .. | 38,990 |
| *Salt*— | | |
| On works .. .. .. .. | | 6,630 |
| On repairs .. .. .. .. | | 1,04,598 |
| | Total .. | 1,11,228 |

*Opium—*

Under this head, an expenditure of Rs. 30 was incurred on repairs.

| *Police—* | | Rs. |
|---|---|---|
| On works | .. .. .. .. | 8 |
| On repairs | .. .. .. .. | 190 |
| | Total .. | 198 |

| *Ecclesiastical—* | | |
|---|---|---|
| On works | .. .. .. .. | 1,776 |
| On repairs | .. .. .. .. | 28,017 |
| | Total .. | 29,793 |

| *Political—* | | |
|---|---|---|
| On works | .. .. .. .. | 5,177 |
| On repairs | .. .. .. .. | 6,159 |
| | Total .. | 11,336 |

| *Scientific Department—Meteorological—* | | |
|---|---|---|
| On works | .. .. .. .. | 624 |
| On repairs | .. .. .. .. | 13,691 |
| | Total .. | 14,315 |

| *Education—* | | |
|---|---|---|
| On works | .. .. .. .. | 10 |
| On repairs | .. .. .. .. | 490 |
| | Total .. | 500 |

*Medical—*

Under this head, an expenditure of Rs. 738 was incurred on repairs.

| *Public Health—* | | Rs. |
|---|---|---|
| On works | .. .. .. .. | 78 |
| On repairs | .. .. .. .. | 499 |
| | Total .. | 577 |

| *Mint—* | | |
|---|---|---|
| On works | .. .. .. .. | 299 |
| On repairs | .. .. .. .. | 4,656 |
| | Total .. | 4,955 |

| *Currency*— | | Rs. |
|---|---|---|
| On works .. .. .. .. | | 670 |
| On repairs .. .. .. .. | | 9,192 |
| | Total .. | 9,862 |

*Miscellaneous Departments*—

Under this head, an expenditure of Rs. 63 was incurred on repairs.

*Miscellaneous*—

Under this head an expenditure of Rs. 3,992 was incurred on repairs.

| *Post Offices**— | | Rs. |
|---|---|---|
| On works .. .. .. .. | | 9,078 |
| On repairs .. .. .. .. | | 76,539 |
| | Total .. | 85,617 |

The work of constructing a Post Office and Post Master's quarters at Andheri was in progress.

| *Telegraphs*— | | Rs. |
|---|---|---|
| On works .. .. .. .. | | 1,122 |
| On repairs .. .. .. .. | | 22,357 |
| | Total .. | 23,479 |

| *Archæological*†— | | |
|---|---|---|
| On works .. .. .. .. | | .... |
| On repairs .. .. .. .. | | 21,843 |
| | Total .. | 21,843 |

*Military Works*—

Under this head an expenditure of Rs. 6,682 was incurred on repairs.

*Provincial Services.*

| *Land Revenue*— | | Rs. |
|---|---|---|
| On works .. .. .. .. | | 2,757 |
| On repairs .. .. .. .. | | 3,148 |
| | Total .. | 5,905 |

| *Excise*— | | |
|---|---|---|
| On works .. .. .. .. | | 4,018 |
| On repairs .. .. .. .. | | 17,420 |
| | Total .. | 21,438 |

* From the year 1921-22 the expenditure on Post and Telegraph Buildings has been transferred to the Accountant General, Posts and Telegraphs.

† From the year 1921-22 the expenditure on Archæological works has been transferred to the Accountant General, Central Revenues.

| | | Rs. |
|---|---|---|
| *Forests*— | | |
| On works | | 1,272 |
| On repairs | | 3,589 |
| | Total | 4,861 |
| *Registration*— | | |
| On works | | 1,501 |
| On repairs | | 125 |
| | Total | 1,626 |
| *General Administration*— | | |
| (1) Residences for Heads of Provinces— | | |
| On works | | 24,441 |
| On repairs | | 1,54,345 |
| | Total | 1,78,786 |
| (2) Provincial Legislative Councils— | | |
| On works | | 245 |
| On repairs | | 10,954 |
| | Total | 11,199 |
| (3) Secretariat and Headquarters Establishment— | | |
| On works | | 66 |
| On repairs | | 8,098 |
| | Total | 8,164 |
| (4) Commissioners and District Officers— | | |
| On works | | 30,025 |
| On repairs | | 1,64,379 |
| | Total | 1,94,404 |
| *Administration of Justice*— | | |
| On works | | 8,471 |
| On repairs | | 48,451 |
| | Total | 56,922 |

The work of extension of the Pleaders' Chambers in the compound of the Judicial Courts at Ahmedabad was in progress during the year under report.

| | | Rs. |
|---|---|---|
| *Miscellaneous*— | | |
| On works | | 735 |
| On repairs | | 23,810 |
| | Total | 24,545 |

| *Jails and Convict Settlements*— | | Rs. |
|---|---|---|
| On works | .. | 32,455 |
| On repairs | .. | 30,848 |
| Total | .. | 63,303 |

| *Police*— | | |
|---|---|---|
| On works | .. | 1,70,179 |
| On repairs | .. | 2,05,570 |
| Total | .. | 3,75,749 |

The work of converting two stables into motor garages in the compound of the Police Lines, Shepherd Road, Byculla, Bombay, was completed.

The work of constructing 120 quarters for the Head Quarters Police at Surat was in progress.

*Scientific Department*—

Under this head, an expenditure of Rs. 2 was incurred on repairs.

| *Educational—University*— | | Rs. |
|---|---|---|
| On works | .. | 2,638 |
| On repairs | .. | 33,402 |
| Total | .. | 36,040 |

| *Secondary*— | | |
|---|---|---|
| On works | .. | 5,643 |
| On repairs | .. | 12,256 |
| Total | .. | 17,899 |

| *Primary*— | | |
|---|---|---|
| On works | .. | .... |
| On repairs | .. | 1,958 |
| Total | .. | 1,958 |

| *Special*— | | |
|---|---|---|
| On works | .. | 1,434 |
| On repairs | .. | 17,624 |
| Total | .. | 19,058 |

| *Miscellaneous*— | | |
|---|---|---|
| On works | .. | 654 |
| On repairs | .. | 21,375 |
| Total | .. | 22,029 |

| *Medical*— | | Rs. |
|---|---|---|
| On works .. .. .. .. | | 45,868 |
| On repairs .. .. .. .. | | 1,32,604 |
| | Total .. | 1,78,472 |

The work of providing 3 rooms for the mortuary in the Civil Hospital at Ahmedabad was carried out during the year under review.

| *Miscellaneous*— | | Rs. |
|---|---|---|
| On works .. .. .. .. | | 1,081 |
| On repairs .. .. .. .. | | 29,919 |
| | Total .. | 31,000 |
| *Agriculture*— | | |
| On works .. .. .. | | 5,356 |
| On repairs .. .. .. .. | | 15,066 |
| | Total .. | 20,422 |
| *Stationery and Printing*— | | |
| On works .. .. | | 48 |
| On repairs .. .. .. .. | | 7,553 |
| | Total .. | 7,601 |
| *Civil Works*— | | |
| On works .. .. .. | | 17,213 |
| On repairs .. .. .. | | 1,74,100 |
| | Total .. | 1,91,313 |
| *Public Health*— | | |
| On works .. .. .. .. | | 527 |
| On repairs .. .. .. .. | | 22,654 |
| | Total .. | 23,181 |
| *Miscellaneous Departments*— | | |
| On works .. .. .. .. | | 5,234 |
| On repairs .. .. .. .. | | 3,909 |
| | Total .. | 9,143 |

*Government Central Stores, Workshop and Training Centre, Dapuri.*

During the year under report, the total value of work turned out at the Workshop was Rs. 1,63,704, which showed an increase of about Rs. 42,000 over last year's figure of Rs. 1,20,706. The apparent loss of Rs. 56,188 in working during that year was in the year under report reduced to Rs. 20,466 as the result of increased business carried out during the year.

The work done was of the normal varied nature and included repairs to road rollers, portable engines, hand pumps, centrifugal pumps, concrete mixers, portable pumping sets, lawn mowers, agricultural machinery, air compressor, printing machinery, as also the remetalling of bearings and the manufacture of sluice gates varying in size from 7″ diameter to 4′-0″ × 3′-6″. Socketed gates from 7″ to 12″ diameter, suitable for fixing to earthware or Hume pipes were also made in fairly large quantities enabling mass production methods to be employed with resulting increased profit to the works. The articles manufactured at the Workshop included, amongst others, 600 sewer cleaning rods, special paper punches, 15″ expansion joints, roof trusses, meter boxes, road signs, 560 running feet of unclimable fencing, gauges, night soil ejector, water carts, flexible joints for 15″ Hume pipes, floating arms for balancing tank, hot water supply tank, oil tank, vacuum test chamber, two 18″ foot valves, observation tubes, 2,600 orifices for Paterson filter, B. S. S. pipe specials, liners and pistons for 150 B.H.P. Oil Engine, 23 tons " Everite " specials and 90 tons " Everite " joints. The two more important works undertaken during the period under review were the modification of the Karad Water Works and the complete overhaul of a Worthington pumping engine of 670 gallons per minute capacity. On 28 occasions trained mechanics were sent to various parts of the Presidency for carrying out overhauls.

Work was done for private firms to the value of Rs. 54,148. The bulk of this consisted of the manufacture of " Everite " joints and specials ; the turn-over on this item alone was Rs. 41,285. During the year 32 to 38 apprentices were continuously under training. Four apprentices finished their period of training and remained in the shop as tradesmen. The words " Training Centre " were added to the designation of the Workshop during the year, and in order to justify and demonstrate this side of the activities of the centre, the apprentices have prepared many engine parts and general engineering appliances.

### B—Architectural.

Sketch and detailed plans were prepared for several buildings in connection with the proposed New Council Hall, Poona ; Post Office at Byculla ; Post Office at Ahmedabad ; Bungalow for a High Court Judge, Cumballa Hill, Bombay; and the District and Subordinate Judges' Courts at Sholapur, Jalgaon and Larkana. Scale plans and scale drawings were prepared for balconies in the General Post Office, Bombay, and the room over entrance porch in the Central Telegraph Office, Bombay.

As regards public and institutional buildings, sketch plans were prepared for buildings in connection with the Anglo-Urdu High School, Poona, and the Ismail College at Andheri.

Revised type designs of second class Sub-Judges' Courts, in Sind as well as the Presidency proper, were prepared during the year under report.

## C—Electrical.

### (1) *Electric Licenses.*

Electricity has continued to attract the attention of the public in an increasing degree. This great public amenity is now generally looked upon as a necessity and not as a luxury while its development in the Bombay Presidency is probably on a far larger scale than in the case of any other province in India. Six new licenses, and one sanction under Section 28 of the Indian Electricity Act, were granted during the year under report: these licenses etc. concerned the supply of electricity to Belgaum, Baramati, Mirpurkhas, Bulsar, Bagalkot, Jacobabad and Yeola, while several more applications were still under the consideration of Government. The number of licenses, excluding those since revoked, but including sanctions under Section 28 of the Indian Electricity Act, actually in operation at the beginning of the year under report was 40, while at the end of the year the number operating was 47 besides which 16 were still under consideration.

### (2) *Electric Works.*

Under this head the expenditure incurred was as follows :—

| | Rs. |
|---|---|
| On works .. .. .. .. | 36,007 |
| On repairs .. .. .. .. | 1,68,092 |
| Total .. | 2,04,099 |

An expenditure of Rs. 997 was incurred during the year under report, in purchasing materials in connection with the scheme for the electrification of the Government Buildings at Larkana: this work has since been given out on contract and it is expected to be completed in all respects before the end of October 1933. The following three important works were completed at the outlays noted against each :—

| | Rs. |
|---|---|
| Special repairs to the Electric Installation in the Civil Hospital, Karachi .. .. | 8,000 |
| Special repairs to the Battery at the Vaccine Institute, Belgaum .. .. .. | 4,010 |
| Special repairs to the Electric Installation in a portion of the Royal Institute of Science, Bombay. .. .. .. .. | 3,987 |

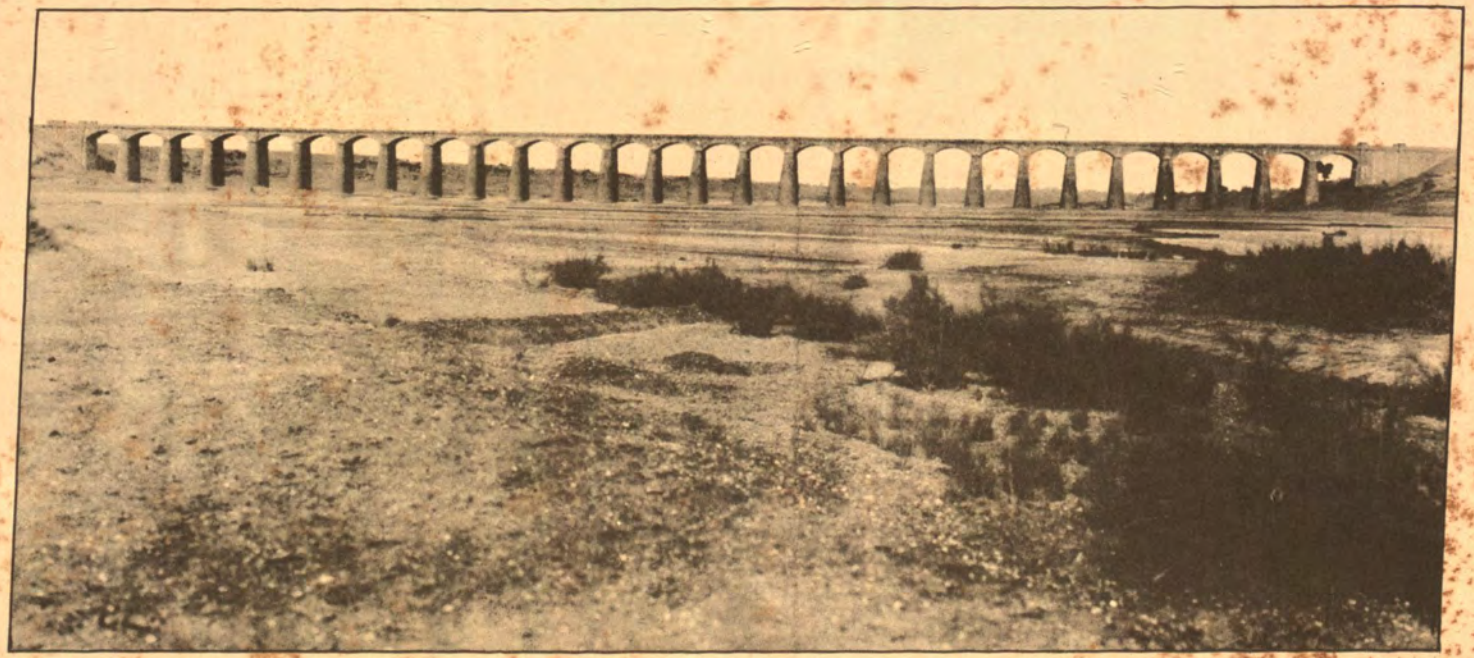
## D—Communications.

Under this head the expenditure incurred was as follows :—

| | Rs. |
|---|---|
| On works .. .. .. .. | 18,63,953 |
| On repairs .. .. .. .. | 26,61,649 |
| Total .. | 45,25,602 |

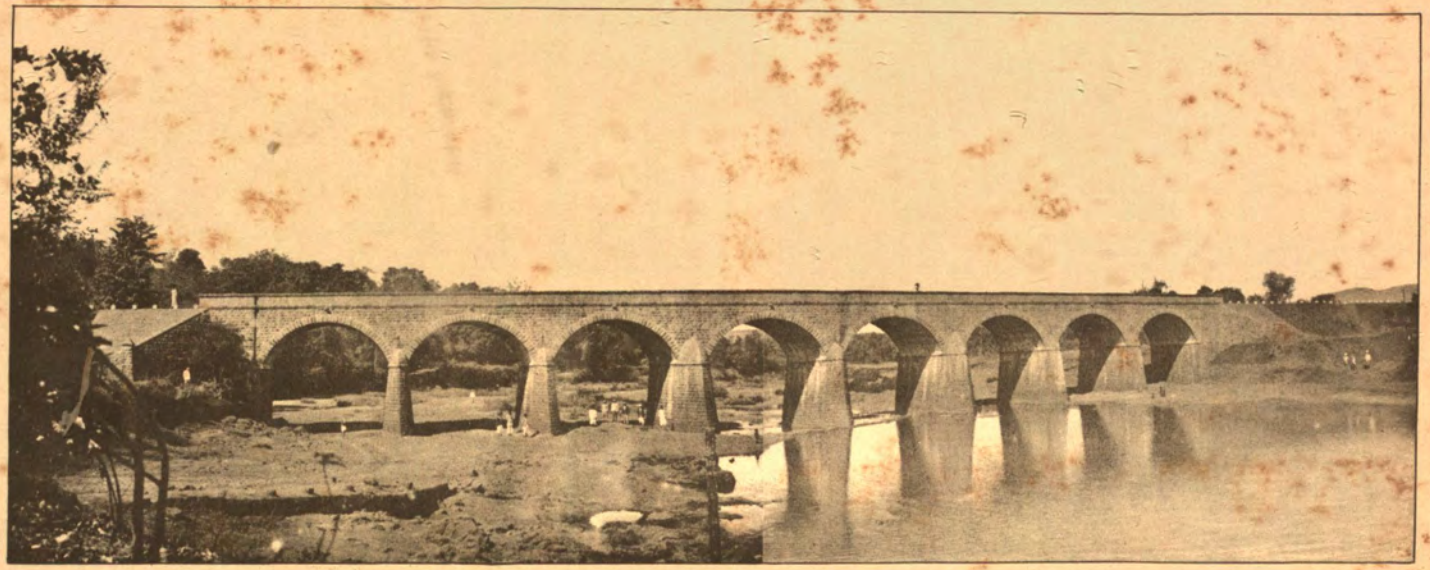
The principal works completed, or nearly completed, during the year were :—

| | |
|---|---|
| Improvements and widening of the Manor-Varoti Road.<br>Providing 2″ asphalt macadam in portions of furlongs 1, 2 and 3 of mile 6 of the Bandra-Ghodbunder Road.<br>Providing 2″ semi-grouted asphalt macadam in mile 5/3 to 5/7 of the Bandra-Ghodbunder Road. | Thana Division. |
| Providing a full grout asphalt macadam surface 2″ thick for the Eastern approach of the Ellis Bridge, Ahmedabad.<br>Providing 2½″ (brick) asphalt macadam 9′ wide (full grout) over brick on edge soling 4½″ deep in furlong 15/1 of the Sanand-Viramgam Road.<br>Providing 2½″ brick asphalt macadam 9′ wide full grout on foundation consisting of brick on edge soling 4½″ deep with consolidated broken brick metal 4½″ deep on top, in furlong 15/2 of Sanand-Viramgam Road.<br>Providing an experimental length 500 rft. (20 feet width) of cement concrete road surface (using brick bats as aggregate) for the Western approach of the Ellis Bridge, Ahmedabad.<br>Providing a semi-grout asphalt macadam surface 2″ thick (using over burnt brick bats as aggregate) in mile 2 of Ahmedabad-Bareja Road.<br>Reconstructing a bridge in mile No. 7 of the Ahmedabad-Dholka Road. | Ahmedabad Division. |
| Constructing three masonry bridges over Linga, Ratambi and Umreth Nallas in miles 29-38 of the Malwan-Phonda Road.<br>Improving the Dharamtar-Mahableshwar Road by raising certain portions in miles 49 to 50.<br>Bridge over the Gad River at Aravli on the Hatkhamba-Poladpur Road. | Ratnagiri Division. |
| Improvements to road from Indapur to Sarati via Bawda. | Sholapur Division. |



THE SYKES BRIDGE OVER THE RIVER TAPTI AT GIDHAD SITE ON THE BOMBAY AGRA ROAD.

| | |
|---|---|
| Date of Photo ... ... | ... January, 1933 |
| Date of commencement of Work | ... January, 1926. |
| Estimated cost ... .. | ... Rs. 15,61,197. |
| Total expenditure to 31st March. 1933 | ... Rs. 14,86,869. |



RATNAGIRI DIVISION.

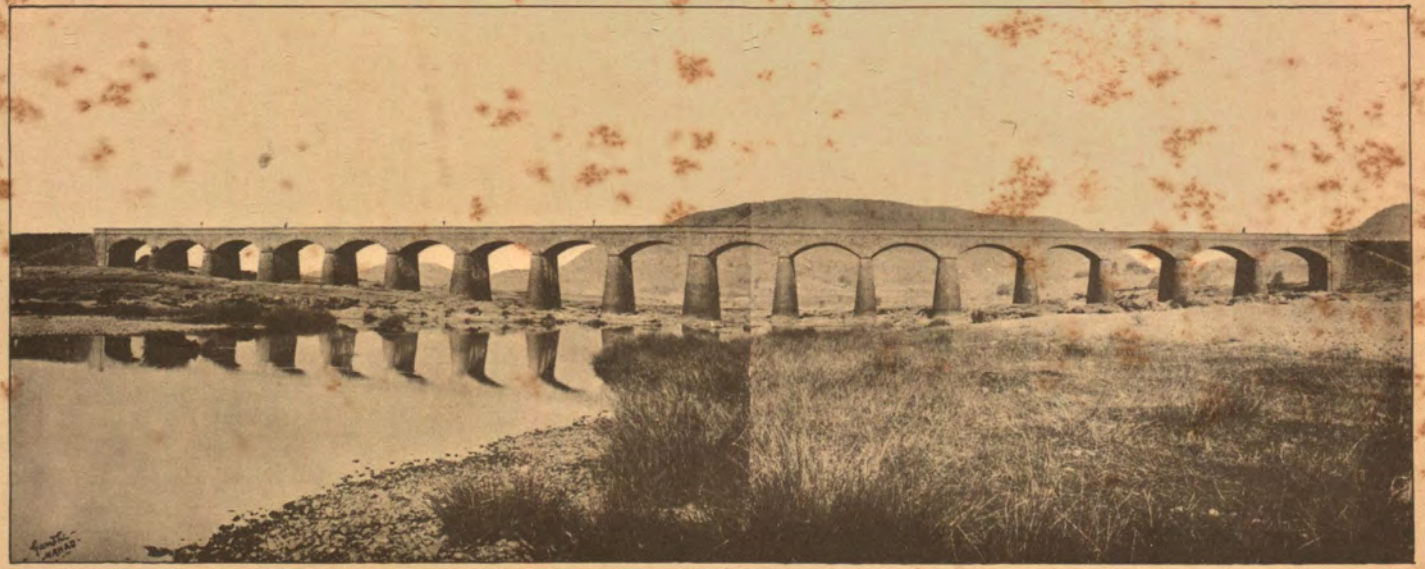
A masonry Bridge over Gad River near Aravli in mile No. 34 of Hatkhamba Poladpur Road.

Upstream view of the Bridge having 8 spans of 30' each.

Estimated Cost Rs. 1,07,523/-

Commenced in January 1930. Completed in March 1933.

Total Expenditure Rs. 1,07,139/7/-



RATNAGIRI DIVISION.

A masonry Bridge over Savitri River near Mahad in mile No. 58 of Dharamtar Mahabaleshwar Road.
Downstream view of the Bridge having 17 spans of 30' each.
Estimated Cost Rs. 2,39,881/-
Commenced in October 1928. Work in progress.
Total Expenditure Rs 2,38,797/11/3

The principal works in progress during the year were :—

| | |
|---|---|
| Construction of a section from Talasari to Vapi of the Bombay-Ahmedabad-Rajputana Road.<br>Construction of a diversion of the Bombay-Agra Road outside Thana town. | Thana Division. |
| Constructing bridges etc. on 12 Nallas on Surat-Sahol section. | Surat and Broach Division. |
| Metalling and improving the road from Viramgam to Mandal. | Ahmedabad Division. |
| Asphalting the Poona-Bangalore Road between Hubli and Bhairidevarkoppa. | Dharwar Division. |
| Improving the Sadashivgad-Kadra, Karwar-Bellary and Kumta-Hubli Roads. | Kanara Division. |
| Constructing masonry bridges across the Gad River, near Kankavli and the Janoli River on the Malwan-Phonda Road.<br>Constructing masonry drains with R.C.C. slabs over 146 Nallas on Vadkhal-Mahad and Mahad-Poladpur Sections of the Dharamtar-Mahableshwar Road. | Ratnagiri Division. |
| Constructing Warsa-Borzar Road, Section I, Dhadgaon-Shahada Road, Section IV, and road from Chalisgaon to Malegaon.<br>Improvements to Taloda-Shahada Road, Sections I and II. | Khandesh Division. |
| Brick-paving the Jacobabad-Shikarpur Road from Kot-Sultan to Shikarpur from mile 18 to 26. | Shikarpur Canals Division. |
| Improvements to the Karachi-Kotri Road .. | Karachi Buildings and Karachi Canals Divisions. |

The following works were financed from the Petrol Tax Fund, and the expenditure incurred on them during the year was as shown below :—

*Bombay-Ahmedabad-Rajputana Road.*

| | | |
|---|---|---|
| 1. | Constructing Talasari-Vapi Section (wanting links, mile 16½) .. Rs. | 4,979 |
| 2. | Improving Manor-Varot Section .. .. Rs. | 84,987 |

| | | | |
|---|---|---|---|
| | *Bombay-Agra Road.* | | |
| 3. | Providing 2″ asphalt macadam surface from miles 9/7 to 13/1 on Sion-Ghatkopar Section .. Rs. 48,214 | | |
| 4. | Construction of bridges etc. on 13 dips in miles 40 to 58 of Bhiwandi-Vihigaon Section .. .. Rs. 2 | | |
| 5. | Diversion of Bombay-Agra Road round Thana Town on Sion-Thana Section .. Rs. 31,486 | Thana Division. | |
| | *Bandra-Ghodbunder Road.* | | |
| 6. | Providing 2″ asphalt macadam surface (full grout) to miles 6/4 to 9/7 of Bandra-Ghodbunder Road on a central 9′ width with two 5′-6″ shoulders of water bound macadam seal coated .. Rs. 43,209 | | |
| 7. | Providing 2″ asphalt macadam full grouted, in portions of furlongs 1, 2 and 3 in mile 6 of Bandra-Andheri Section .. .. Rs. 4,594 | | |
| | *Bombay-Ahmedabad-Rajputana Road.* | | |
| 8. | Constructing link road from Damanganga to Vapi (2 miles) on Talasari-Vapi Section .. Rs. 11,254 | | |
| 9. | Improving Sabargam-Surat Section .. .. Rs. 14,995 | | |
| 10. | Improving miles 4 to 9/6 of Matwad-Navsari Section .. Rs. 14,101 | Surat and Broach Division. | |
| 11. | Diversion round Pardi on Vapi-Bulsar Section .. .. Rs. 2,500 | | |
| 12. | Constructing bridges etc., on Surat-Sahol Section .. Rs. 4,518 | | |
| 13. | Approaches of the causeway over the Kolak river in mile 15 of Bulsar-Vapi Road .. Rs. 109 | | |
| 14. | Metalling and improving Viramgam-Mandal Road .. Rs. 49,995 | Ahmedabad Division. | |
| | *Bombay-Agra Road.* | | |
| 15. | Construction of a bridge to replace the dangerous bridge in mile 136 of Nasik-Malegaon Section .. Rs. 11,009 | | |
| 16. | Construction of a bridge to replace the dangerous bridge over the Mosam river at Malegaon on Vihigaon-Nasik-Malegaon Section .. Rs. 524 | Nasik Division. | |

*Bombay-Poona-Bangalore Road.*

| | | |
|---|---|---|
| 17. | Making improvements to low-lying miles 75-84 on Poona side of Khandala on Khandala-Poona Section .. .. Rs. 98,565 | Poona Division. |
| 18. | Resurfacing with asphalt the approach portion to Poona, 5 miles on each side on Bombay-Poona Section .. .. Rs. 24 | |
| 19. | Asphalting the road between Hubli and Bhairidevarkoppa .. Rs. 62,259 | Dharwar Division. |

*Sholapur-Bijapur-Hubli Road.*

| | | |
|---|---|---|
| 20. | Causeway over Benni Nalla between Navalgund and Nargund .. .. Rs. 17,970 | Dharwar Division. |

*Dhulia-Bhusaval-Edlabad-Nagpur Road.*

| | | |
|---|---|---|
| 21. | Bridges between Bhusaval and Warangaon on Bhusawal-Edlabad Section .. .. Rs. 1,364 | Khandesh Division. |

*Bombay-Konkan-Goa Road.*

| | | |
|---|---|---|
| 22. | Masonry drains with reinforced cement concrete slabs over 146 nallas on Vadkal-Mahad and Mahad-Poladpur Sections .. .. Rs. 1,16,970 | Ratnagiri Division. |
| 23. | Bridge on the Gad river near Kankavli on the Section from Phonda to border of Ratnagiri near Kankavli.. .. Rs. 45,570 | |
| 24. | Bridge over the Janavli river on Malwan-Phonda Section (Phonda to Kankavli) .. Rs. 46,184 | |
| 25. | Bridge over the Kasal river on Malwan-Phonda Section (border of Ratnagiri to Kasal).. .. Rs. 24,962 | |
| 26. | Constructing 2 small bridges over Asurda and Savarda nallas on Hatkhamba-Poladpur Road .. Rs. 3,602 | |
| 27. | Easing the gradient and widening the curve in Sukelikhind in mile 21 of Dharamtar-Mahableshwar Road .. .. Rs. 366 | |
| 28. | Improving Dharamtar-Mahableshwar Road by raising certain portions in Section I between Dharamtar and Dasgaon (miles 49 and 50) .. .. Rs. 23,794 | |

*Bombay-Konkan-Goa Road*—(continued).

| | | | |
|---|---|---|---|
| 29. | Constructing three masonry bridges over the Linga, Ratambi, and Umreth Nallas in miles 29–38 of Malwan-Phonda Road .. Rs. 22,118 | Ratnagiri and Belgaum Divisions. |

*Karwar-Bellary Road.*

| | | | |
|---|---|---|---|
| 30. | Improving Karwar-Bellary Road (miles 1–75) .. .. Rs. 25,905 | Kanara Division. |

*Kumta-Hubli Road.*

| | | | |
|---|---|---|---|
| 31. | Improvements .. Rs. 18,794 | Kanara Division. |

*Ratnagiri-Kolhapur-Miraj-Bijapur Road.*

| | | | |
|---|---|---|---|
| 32. | Strengthening and repairing the bridge over the Krishna at Udgaon on Umba-Udgaon Section .. Rs. 10,993 | Belgaum Division. |

*Karachi-Hyderabad-Rohri-Punjab Road* (*East Road*).

| | | | |
|---|---|---|---|
| 33. | Improvements to the Section from Hyderabad to Hala .. Rs. 46,570 | Hala and Karachi Buildings Divisions. |
| 34. | Provision of a roadway in Kotri-Bridge Project on Kotri-Hyderabad Road Rs. 3,94,134 | Karachi Buildings Division. |
| 35. | Improvements to Karachi-Kotri Section Rs. 75,446 | Karachi Buildings and Karachi Canals Divisions. |
| 36. | Improvements to the section from Sakrand to Moro .. Rs. 40,756 | Dad Division. |

*Kotri-Dadu-Shikarpur-Baluchistan Road* (*West Road*).

| | | | |
|---|---|---|---|
| 37. | Brick-paving the Shikarpur-Kot-Sultan Section in a width of 9 feet and surfacing it with a 1½″ thick carpet of sand and bitumen .. Rs. 58,973 | Begari Canals Division. |
| 38. | Combined bridge and regulator over the Aral-Manchar near Sehwan Rs. 16,737 | Manchar Drainage Division. |

*Experimental works.*

| | | |
|---|---|---|
| 39. | Providing semi-grouted 2″ asphalt macadam surface in mile 5/4 to 5/7 of Bandra-Ghodbunder Road .. .. Rs. 14,418 | Thana Division. |
| 40. | Providing a full grout asphalt macadam surface 2″ thick (using over-burnt brick bats as aggregate) for the eastern approach of the Ellis Bridge, Ahmedabad .. Rs. 3,798 | Ahmedabad Division. |
| 41. | Providing a semi-grout asphalt macadam surface 2″ thick (using over-burnt brick bats as aggregate) in mile No. 2 of Ahmedabad-Bareja Road .. .. Rs. 11,536 | |
| 42. | Providing 2½″ (brick) asphalt macadam (full grout) over brick-on-edge-soling 4½″ deep in furlong 15/1 of Sanand-Viramgam Road .. Rs. 3,766 | |
| 43. | Providing 2½″ (brick) asphalt macadam (full grout) on a foundation consisting of brick-on-edge-soling 4½″ deep on top in furlong 15/2 of Sanand-Viramgam Road .. Rs. 4,600 | |
| 44. | Providing cement concrete road surface for the western approach of the Ellis Bridge, Ahmedabad .. Rs. 5,798 | |
| 45. | Providing a treble wheel track creteway on Poona-Ahmednagar Road from mile 2/1 to 2/5 .. Rs. 16,954 | Poona Division. |
| 46. | Providing a 2″ carpet of sand and bitumen over 6″ brick-on-edge-soling on Karachi-Malir Road, ½ furlong in mile 7 (6⅛) and 3½ furlongs in mile 11 (10/0 to 10/3½) .. .. Rs. 19,310 | Karachi Buildings Division. |

Repairs to communications to the extent of Rs. 13,578 were executed out of the Petrol Tax Fund.

*Arboriculture.*

Nurseries were maintained at various places, and planting, watering, and protection of road side trees continued to receive attention as usual. About 19,310 trees were planted during the year along the Provincial and Local Fund roads in charge of this Department.

## E—Miscellaneous.

Under this head the expenditure incurred was as follows :

| | Rs. |
|---|---|
| On works .. .. .. .. | 2,18,018 |
| On repairs .. .. .. .. | 3,32,744 |
| Total .. | 5,50,762 |

*Public Health, Water Supply, Drainage and Boring Works.*

During the year under report designs, specifications, preliminary estimates, and proposed layouts, were prepared for pumping plants for the Poona Drainage, Bahiroba Pumping Station, and the Islampur and Jejuri Water Supplies. Detailed working drawings for the layout of pumping machinery were prepared for Karad Water Works and Poona Drainage—Low Level and Mangalwar Peth Pumping Stations. The erection of the engines at Karad was carried out departmentally. The pumping machinery at Hyderabad (Sind), Jacobabad, Sholapur, Surat, Kapadvanj, and Ahmedabad, was inspected during the year under review. Periodical records of the fuel consumption and work done by municipal pumping machinery, situated at several towns, continued to be received, and were scrutinized with a view to economy. Twenty-six road rollers were inspected during the year under report.

A new Babcock and Wilcox Boiler, with a chain grate stoker, capable of producing 4000 lbs. of steam per hour at a pressure of 120 lbs. per square inch, was erected complete, at the Poona Cantonment Water Works, the cost being Rs. 36,853. The work of providing a raw-water pump for the Poona Water Works was in progress. Several improvements to the Kirkee Water Works, Hyderabad Water Supply, and Jacobabad Water Supply, were carried out during the year under report. The work of erecting additional pumps at the Fort Lift Pumping Station at Hyderabad (Sind), was completed at a cost of Rs. 37,524. The works of remodelling the Mutha Right Bank Canal into controlled sections and a partial drainage scheme for Shikarpur, were in progress. An expenditure of Rs. 7,654 was incurred during the year in respect of the Poona Drainage Improvement Scheme, Section II. The following works were maintained during the year :—

(1) Poona Water Works.
(2) Kirkee Water Works, including Pashan and Holkar's Bridge.
(3) Repair to fencing along the Mutha Canal.
(4) Repairs to Public Health Laboratory.
(5) Bahiroba Pumping Station.
(6) Pumping Stations at Satara Camp, Karad and Pandharpur.
(7) Matheran Water Supply.
(8) Uran Water Supply.
(9) Alandi Water Supply.
(10) Low level pumping station, Poona City.

A number of boring tools, amounting in aggregate value to about Rs. 12,000 were sold during the period under review. The boring machine and pumping plant were transferred during the year to various places wherever they were required.

## F—Technical Papers.

The following Public Works Department technical paper was issued during the year :—

No. 43 Concise Report on the Punjab Irrigation Works by Mr. M. T. Gibling, B.A. (Cantab.), I.S.E., Executive Engineer, Northern Dadu Division.

## G—Railways.

The Railway lines in the Bombay Presidency are not administered by the Bombay Government but are under the direct control of the Railway Board who exercise control over the railways in British India and in the Indian States.

2. The continued general economic depression of the country is reflected in the Railway Budget for the year 1933-34. The loss for the year 1932-33 estimated at Rs. 7½ crores is anticipated to be worse by Rs. 1¾ crores which is due entirely to the further fall in railway earnings. The total deficit for the year 1933-34 is estimated at Rs. 7·77 crores. No new projects are therefore being undertaken.

No new lines have been opened for traffic nor have any surveys of new lines been undertaken in the Presidency. The only survey that has been completed is that of the Pandharpur-Lonand Extension of the Barsi Light Railway.

The total length of railways in the Presidency including Sind open for traffic during the year under review is 3855·929 miles made up as follows :—

| | Broad gauge. | Metre gauge. | Narrow gauge. | Total. |
|---|---|---|---|---|
| Bombay Baroda and Central India Railway .. | 603·486 | 119·888 | 223·90 | 947·274 |
| Great Indian Peninsula Railway. | 822·321 | .... | 62·064 | 884·385 |
| Madras and Southern Mahratta Railway .. .. | .... | 689·00 | .... | 689·00 |
| North Western Railway .. | 815 | .... | 129·66 | 944·66 |
| Jodhpur Railway .. .. | .... | 223·91 | .... | 223·91 |
| Barsi Light Railway .. | .... | .... | 166·7 | 166·7 |
| | 2,240·807 | 1,032·798 | 582·324 | 3,855·929 |

The above figures are exclusive of the railways traversing the Baroda and the Western India States.

## H—Development Schemes.

### *I—Back Bay Reclamation Scheme.*

The total expenditure incurred on the Back Bay Reclamation Scheme during the year 1932-33 amounted to Rs. 1,28,521. The following works were carried out during the year :—

(1) The work of providing increased protection of big boulders for the rubble mound under the sea wall at Marine Lines, between chainages 1,000 to 2,000, was commenced in January 1932 and completed in July 1932 at a cost of Rs. 26,725. The expenditure incurred during the year amounted to Rs. 16,815. About 248,363 cubic feet of building debris which had been supplied free of cost at certain accessible points outside block 7 was deposited and spread in that block at a total cost of Rs. 2,000. The work of providing 'katcha' roads, stone kerbing, etc. in block I is in progress. The expenditure incurred during the year amounted to Rs. 13,516. A 'katcha' road has also been provided from the south-end of Cuffe Parade to the south end of plot B in block 5. Trees have been planted along the road-sides of part of Marina and Churchgate Street extension. The work is being further extended. The expenditure during 1932-33 amounted to Rs. 1,898. The work of preparing and grassing the remaining area of about 8 acres of the recreation ground in block I was carried out departmentally. Six cricket pitches, one football field and one hockey field have been provided and allotted to private clubs on payment. A sand ride 10' wide has been provided around the recreation ground. A pipe drain to carry storm water from block I has been connected to storm water drain No. 8 at a cost of Rs. 37,018.

(2) *Sanitation and anti-malarial measures.*—The usual works under this head were carried out during the year at a cost of Rs. 2,512.

(3) *Repairs and maintenance.*—A sum of Rs. 14,527 was spent during the year on the maintenance of the sea wall and rubble mound. The damage caused by the last monsoon was repaired. The expenditure incurred on the maintenance of the surplus plant amounted to Rs. 2,879.

(4) *Disposal of surplus stores, plant, etc.*—Some rolling stock and other miscellaneous articles of surplus stores and plant were disposed of during the year. The total realizations amounted to Rs. 94,001.

(5) A list of the members of the Standing Advisory Committee for the Back Bay Reclamation Scheme will be found in Appendix VI.

### *II—Suburban Schemes.*

(1) *Railway Schemes.*—During the year under review a portion of the Central Salsette Tramway Line from Andheri to Kurla was dismantled and disposed of.

(2) *Water Supply Schemes.*—The Salsette and Ambernath Water Supply Schemes were transferred from the Public Health Works Division to the Poona Water Works Division with effect from 1st April 1932. Extensions of pipe lines for supply of water in the Khar Model Suburb and Vile Parle of the Salsette Water Supply Scheme were laid during the year. The total expenditure and receipts on the water supply schemes amounted to Rs. 3,22,148 and Rs. 5,01,935 respectively.

(3) *Ambernath Electric Supply Scheme.*—The main transformers, which were hired in 1931 from Messrs. Tatas for transforming high voltage energy to lower and suitable voltage, were replaced by Government by a small transformer with a view to avoiding the no-load losses on the hired transformers. The expenditure and receipts on the scheme amounted to Rs. 16,596 and Rs. 24,415 respectively.

## *III—Civil Aviation.*

*Juhu Aerodrome.*—The work of preparing a civil landing ground at Juhu which was commenced in 1930-31 on behalf of the Government of India was completed during the year 1932-33 at a total cost of Rs. 6,00,769.

## APPENDIX I.

*Statement showing the expenditure on Civil and Military Works during the year* 1932–33.

| Service Head | Original Works | | Repairs | | Total | |
|---|---|---|---|---|---|---|
| | Grant | Outlay | Grant | Outlay | Grant | Outlay |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 50—*Military Works.* | | | | | | |
| Works .. .. | .. | .. | 7,000 | 6,682 | 7,000 | 6,682 |
| Establishment—Non-voted .. | .. | .. | .. | .. | 1,750 | 808 |
| Establishment—Voted | .. | .. | .. | .. | .... | 2,526 |
| Tools and Plant .. | .. | .. | .. | .. | 210 | 129 |
| Total, Military Works. | .. | .. | 7,000 | 6,682 | 8,960 | 10,145 |
| 41—*Civil Works—Central.* | | | | | | |
| Buildings—Non-voted | 7,397 | 6,953 | 27,750 | 26,290 | 35,147 | 33,243 |
| Buildings—Voted .. | 10,766 | 9,732 | 1,82,500 | 1,79,611 | 1,93,266 | 1,89,343 |
| Miscellaneous—Voted. | .. | .. | 4,000 | 3,992 | 4,000 | 3,992 |
| Establishment—Voted | .. | .. | .. | .. | 47,264 | 59,541 |
| Establishment—Non-voted .. .. | .. | .. | .. | .. | 9,078 | 21,041 |
| Tools and Plant—Voted .. .. | .. | .. | .. | .. | 5,883 | 3,353 |
| Tools and Plant—Non-voted .. | .. | .. | .. | .. | 1,147 | .... |
| Grant-in-aid—Non-voted .. .. | .. | .. | .. | .. | 5,430 | 4,869 |
| *Deduct*—English cost of stores and establishment .. | .. | .. | .. | .. | .... | .... |
| Loss or Gain by Exchange .. | .. | .. | .. | .. | .... | .... |
| Expenditure .. | .. | .. | .. | .. | .... | .... |
| Total, 41—Civil Works—Central .. | 18,163 | 16,685 | 2,14,250 | 2,09,893 | 3,01,215 | 3,15,382 |
| 41—*Civil Works—Provincial.* | | | | | | |
| Buildings—Reserved . | 24,534* | 24,441 | 1,56,450* | 1,54,345 | 1,80,984 | 1,78,786 |
| Buildings—Transferred .. | 3,50,768 | 3,30,705 | 36,83,042 | 9,88,814 | 40,33,810 | 13,19,519 |
| Communications .. | 16,84,436 | 17,08,399 | 13,709 | 26,61,649 | 16,98,145† | 43,70,048† |
| Miscellaneous .. | 435 | 391 | .. | 24,401 | 435 | 24,792 |
| Carried over .. | | | | | | |

* Excluding the amounts credited to Reserve.
† Inclusive of expenditure and grant for road development fund works.

| Service Head | Original Works | | Repairs | | Total | |
|---|---|---|---|---|---|---|
| | Grant | Outlay | Grant | Outlay | Grant | Outlay |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Brought over .. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 41—*Civil Works—Provincial*—contd. | | | | | | |
| Establishment—Reserved—Non-voted .. | .. | .. | .. | .. | .... | 25,071 |
| Voted .. .. | .. | .. | .. | .. | .... | 56,092 |
| Establishment—Transferred—Non-voted .. | .. | .. | .. | .. | 16,75,123 | 6,16,560 |
| Voted .. .. | .. | .. | .. | .. | 55,61,400 | 16,75,971 |
| Tools and Plant—Reserved .. | .. | .. | .. | .. | .... | 4,364 |
| Tools and Plant—Transferred .. | .. | .. | .. | .. | 2,84,800 | 1,40,364 |
| Grant-in-aid .. | .. | .. | .. | .. | 8,40,106 | 8,39,979 |
| Suspense .. | .. | .. | .. | .. | 54,779 | −3,619 |
| *Deduct*—English Cost of Stores and Establishment—Stores—Transferred. .. | .. | .. | .. | .. | −16,520 | −16,358 |
| Establishment—Transferred—Non-voted .. | .. | .. | .. | .. | −3,23,333 | −2,82,650 |
| Voted .. .. | .. | .. | .. | .. | −14,651 | −9,632 |
| Loss or Gain by exchange—Stores .. | .. | .. | .. | .. | .... | −80 |
| Loss or Gain by Establishment—Non-voted . | .. | .. | .. | .. | −1,133 | −951 |
| Loss or Gain by Establishment—Voted .. | .. | .. | .. | .. | −51 | −31 |
| Expenditure in England—Stores .. | .. | .. | .. | .. | 16,520 | 16,438 |
| Establishment—Non-voted .. .. | .. | .. | .. | .. | 3,22,200 | 2,83,601 |
| Establishment—Voted. .. | .. | .. | .. | .. | 14,600 | 9,663 |
| Total, 41—Civil Works—Provincial. | 20,60,173 | 20,63,936 | 38,53,201 | 38,20,209 | 1,43,20,582 | 92,48,836 |
| 60—*Civil Works.* | | | | | | |
| Buildings .. | 7,938* | 6,715 | .. | .. | 7,938 | 6,715 |
| Communications .. | 1,57,477* | 1,55,554 | .. | .. | 1,57,477 | 1,55,554 |
| Miscellaneous— | | | | | | |
| Establishment—Non-voted .. | .. | .. | .. | .. | .... | 17,925 |
| Establishment—Voted | .. | .. | .. | .. | 1,031 | 54,056 |
| Tools and Plant .. | .. | .. | .. | .. | 58 | 3,142 |
| Total, 60—Civil Works. | 1,65,415 | 1,62,269 | .. | .. | 1,66,504 | 2,37,392 |
| District Local Fund .. | .. | .. | .. | .. | .... | 5,266 |
| Deposit Contributions .. | .. | .. | .. | .. | .... | 1,03,300 |
| Grand Total .. | 22,43,751 | 22,42,890 | 40,74,451 | 40,45,784 | 1,48,06,261 | 99,20,321 |

* Excludes amounts credited to Reserve.

# APPENDIX II.

APPENDIX

*Statement of Roads not within Municipal boundaries, giving lengths of metalled during the*

| Name of Circle. | Name of Division. | Length of metalled roads maintained by the Public Works Department. | Length of unmetalled roads maintained by the Public Works Department. | Length of metalled roads maintained by the Local Authorities. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| | | Miles. | Miles. | Miles. |
| *Presidency Proper.* | | | | |
| Northern Circle .. | Thana .. .. | (*a*)448·42 | 8·12 | (*b*)369·82 |
| | Surat .. .. | (*d*)176·86 | (*e*)14·45 | (*f*)132·91 |
| | Broach .. .. | 53·98 | .... | 34·84 |
| | Kaira .. .. | 180·74 | 9·12 | (*i*)57·41 |
| | Panch Mahals .. | 156·28 | 17·51 | (*k*)27·03 |
| | Ahmedabad .. | (*m*)146·82 | (*n*)54·97 | (*o*)58·51 |
| | Total—Northern Circle .. | 1,163·11 | 104·17 | 680·52 |

*Note.*—The lengths of Provincial roads included in columns 3 and 4 of the above Municipalities in the Bombay Presidency are not now required to contribute towards the shown in the "remarks" column.

(*a*) The decrease in column 3 is due to the deprovincialization of a portion of the

(*b*) The increase in column 5 is due partly to the construction of a new road by the lengths of certain roads communicated by the District Local Board, Kolaba, during the

(*c*) The decrease in column 6 is due to certain lengths of unmetalled roads having been

(*d*) and (*e*) The increase in column 3 and the corresponding decrease in column 4 are having been metalled during the year.

(*f*) The increase in column 5 is due to certain lengths of unmetalled roads having been

(*g*) The increase in column 6 is due partly to the addition of certain new lengths of lengths of roads found more on actual survey by the Board during the year.

(*h*) The increase in column 6 is due to the addition of certain unmetalled length of

(*i*) The increase in column 5 is due to certain unmetalled lengths having been metalled

(*j*) The decrease in column 6 is due to the reasons stated in (*i*) above.

(*k*) The increase in column 5 is due partly to certain unmetalled lengths having been during the year.

(*l*) The decrease in column 6 is due to certain unmetalled lengths having been metalled

(*m*) and (*n*) The increase in column 3 and the decrease in column 4 are due to certain been metalled during the year.

(*o*) The decrease in column 5 is due to certain lengths of Sanand Station road having year.

(*p*) The decrease in column 6 is due to the adoption of correct lengths of certain

II.

*and unmetalled roads maintained by the Public Works and Local Authorities year* 1932–33.

| Length of unmetalled roads maintained by the Local Authorities. | Total length of metalled roads. | Total length of unmetalled roads. | Remarks. | |
|---|---|---|---|---|
| | | | Metalled roads maintained by the Public Works Department in Municipal limits. | Unmetalled roads maintained by the Public Works Department in Municipal limits. |
| 6 | 7 | 8 | 9 | 10 |
| Miles. | Miles. | Miles. | Miles. | Miles. |
| (*c*)73·24 | 818·25 | 81·36 | 23·05 | .... |
| (*g*)299·77 | 309·77 | 314·22 | .... | .... |
| (*h*)168·81 | 88·82 | 168·81 | 1·36 | .... |
| (*j*)14·69 | 238·15 | 23·81 | 10·61 | .... |
| (*l*)21·34 | 183·31 | 38·85 | 1·37 | .... |
| (*p*)264·06 | 205·33 | 319·03 | .... | .... |
| 841·91 | 1,843·63 | 946·08 | 36·39 | .... |

statement are exclusive of portions passing through the Municipal limits. The maintenance of Provincial roads passing through their limits and the lengths of these are

Uran-Panvel road during the year.

District Local Board, Bombay Suburban District, and partly to the correction in the year.

omitted by the District Local Board, Kolaba, during the year.

due to certain unmetalled lengths of Navsari-Matwad and Surat-Sabargam roads

metalled by the Board during the year.

roads constructed by the Board during the year and partly to the adjustment of certain

Broach-Karmad road newly constructed by the Board during the year.

by the Board during the year.

metalled and partly to the addition of certain new lengths constructed by the Board

by the Board during the year.

unmetalled lengths of Ahmedabad-Viramgam and Viramgam-Mandal roads having

been handed over to the Sanand Municipality by the District Local Board during the

roads, shown erroneously in the previous year, by the Board during the year.

APPENDIX

| Name of Circle. | Name of Division. | Length of metalled roads maintained by the Public Works Department. | Length of unmetalled roads maintained by the Public Works Department. | Length of metalled roads maintained by the Local Authorities. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| *Presidency Proper* —contd. | | Miles. | Miles. | Miles. |
| Central Circle .. | Poona .. .. | (*a*)459·04 | (*a*)14·11 | (*b*)333·99 |
| | Sholapur .. .. | (*c*)471·43 | (*c*)95·82 | (*d*)344·04 |
| | Nasik .. .. | (*e*)476·51 | 9·20 | (*f*)180·27 |
| | Khandesh .. | (*h*)663·64 | 15·75 | (*i*)300·21 |
| | Total, Central Circle .. | 2,070·62 | 134·88 | 1,158·51 |
| Southern Circle .. | Belgaum .. .. | (*l*)620·38 | (*m*)95·85 | (*q*)291·86 |
| | Dharwar .. .. | 549·75 | 99·06 | (*q*)578·73 |
| | Ratnagiri .. .. | (*o*)477·35 | .... | (*q*)367·81 |
| | Kanara .. .. | (*p*)385·81 | 194·08 | (*q*) 88·18 |
| | Total, Southern Circle .. | 2,033·29 | 388·99 | 1,326·58 |

(*a*) The increases in cloumns 3, 4 and 9 are due to the transfer of certain roads on the 1st June 1932.

(*b*) The increases in columns 5 and 6 are due to the accounting of certain Local Board Division on abolition of Satara Division.

(*c*) The increases in columns 3, 4 and 9 are due to the additional roads taken over by to the Deccan Irrigation Circle.

(*d*) The increases in columns 5 and 6 are due to the accounting of certain Local Board owing to the abolition of Satara Public Works Division.

(*e*) The net decrease in column 3 is due to the additional portion of the length of transfer of a portion of Khandesh-Nizam-Frontier road to the District Local Board,

(*f*) The increase in column 5 is partly due to the additional roads maintained by the metalled.

(*g*) The decrease in column 6 is due to non-maintenance of certain roads by the District

(*h*) The increase in column 3 is due to the addition to the Bombay-Agra road on account to the Nasik Division, branch road at Bhusawal to the Bhusawal Municipality and

(*i*) The increase in column 5 is partly the result of remeasurement of roads and partly

(*j*) The increase in column 6 is partly due to the addition of certain roads newly

(*k*) The increase in column 9 is due to portions of certain roads previously shown

(*l*) The decrease is partly due to a portion of link and Magazine road lying in the unmetalled portion of the Bijapur-Sindgi road Section II, included under the metalled

(*m*) The increase is due to portion of road previously shown under "metalled"

(*n*) The decrease is due to certain portions of Poona-Bangalore and Belgaum-Lingan Municipality.

(*o*) The net increase is due partly to the provincialization of the Talera-Janavli road done last year through oversight as also to certain correction in the length of the

(*p*) The decrease is due to certain correction in the length of the Karwar-Bellary

(*q*) and (*r*) The lengths of metalled and unmetalled roads maintained by the local

II-- *contd.*

| Length of unmetalled roads maintained by the Local Authorities. | Total length of metalled roads. | Total length of unmetalled roads. | Remarks. | |
|---|---|---|---|---|
| | | | Metalled roads maintained by the Public Works Department in Municipal limits. | Unmetalled roads maintained by the Public Works Department in Municipal limits. |
| 6 | 7 | 8 | 9 | 10 |
| Miles. | Miles. | Miles. | Miles. | Miles. |
| (*b*)2,199·68 | 793·03 | 2,213·79 | (*a*)53·45 | .... |
| (*d*)922·98 | 815·47 | 1,018·80 | (*c*)24·24 | .... |
| (*g*)1,270·62 | 656·78 | 1,279·82 | 14·78 | ·30 |
| (*j*)310·61 | 963·85 | 326·36 | (*k*)29·71 | ·75 |
| 4,703·89 | 3,229·13 | 4,838·77 | 122·18 | 1·05 |
| (*r*)414·74 | 912·24 | 510·59 | (*n*)19·05 | .... |
| (*r*)334·51 | 1,128·48 | 433·57 | 19·95 | 4·49 |
| (*r*)890·73 | 845·16 | 890·73 | 14·00 | .... |
| (*r*)516·35 | 473·99 | 710·43 | 19·76 | 3·83 |
| 2,156·33 | 3,359·87 | 2,545·32 | 72·76 | 8·32 |

amalgamation of the Satara Division with the Poona and Sholapur Divisions from

roads situated in that part of the Satara District which was transferred to the Poona

the Sholapur Division on the abolition of Satara Division minus certain roads transferred

roads situated in that part of the Satara District which is now under Sholapur Division

Malegaon-Chalisgaon road transferred from the Khandesh Division and also to the Nasik, for maintenance.

District Local Board during the year and partly to the length of unmetalled roads being

Local Board during the year under report.

of diversion to Sykes bridge *minus* a portion of Malegaon-Chalisgaon Road transferred

portions of certain roads having been included in Municipal limits.

to certain portions of unmetalled roads being metalled during the year.

constructed minus certain portions of unmetalled roads converted into metalled roads.

in column 3 being now included in Municipal limits.

Cantonment area being transferred to the Belgaum Municipality and partly due to the

portion previously being deleted and shown under unmetalled road.

having been now shown under "unmetalled".

math roads in the Belgaum Sub-Division having been transferred to the Belgaum

and partly to the accounting of a portion of the Waghotan-Kasarda road which was not

Dharamtar-Mahableshwar road.

Road.

authorities shown herein are as now reported by the local bodies concerned.

| Name of Circle. | Name of Division. | Length of metalled roads maintained by the Public Works Department. | Length of unmetalled roads maintained by the Public Works Department. | Length of metalled roads maintained by the Local Authorities. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| *Presidency Proper* —concld. | | Miles. | Miles. | Miles. |
| Deccan Irrigation Circle. | Poona Irrigation .. | 224·85 | .... | .... |
| | Nira Right Bank Canal. | 68·70 | .... | .... |
| | Ahmednagar .. | 298·80 | 57·55 | (*a*)432·65 |
| | Nasik Irrigation .. | 47·00 | .... | .... |
| | Total, Deccan Irrigation Circle. | 639·35 | 57·55 | 432·65 |
| | Total for Presidency Proper. | 5,906·37 | 685·59 | 3,598·26 |
| *Sind.* | | | | |
| Northern Sind Circle. | Shikarpur Canals .. | 21·21 | 2·18 | *60·00 |
| | North Western Canal .. | .... | .... | .... |
| | Begari Canals .. | .... | 30·50 | .... |
| | Khirtar .. | .... | 97·10 | .... |
| | Total, Northern Sind Circle. | 21·21 | 129·78 | 60·00 |
| Southern Sind Circle. | Karachi Buildings .. | (*c*)33·50 | (*c*)141·50 | 9·37 |
| | Karachi Canals .. | 18·50 | (*d*)55·50 | (*e*)2·00 |
| | Fuleli Canals .. | 3·50 | 56·45 | 4·60 |
| | Nazir .. | .... | (*h*)14·50 | (*g*)5·50 |
| | Hyderabad .. | 3·15 | 15·25 | (*g*)5·15 |
| | Total, Southern Sind Circle. | 58·65 | 283·20 | 26·62 |

* The changes are due to correct figures having been reported during the year under

(*a*) Out of these about 185 miles are Provincial roads maintained by the District

(*b*) Increase is due to new roads having been constructed by the District Local

(*c*) The increases in columns 3 and 4 are due to the provincialization of the Karachi-

(*d*) The increase in column 4 is mainly due to the reason mentioned in (*c*) above.

(*e*) The reason for the decrease in column 5 is the same as mentioned in items (*c*)

(*f*) The decrease in column 6 is due partly to the provincialization of the Karachi-

(*g*) The decreases and increases are due to remeasuring the lengths of roads by the

(*h*) The decrease is due to the transfer of 6½ miles to the Southern Jamrao Division

II—*contd.*

| Length of unmetalled roads maintained by the Local Authorities. | Total length of metalled roads. | Total length of unmetalled roads. | Remarks. | |
|---|---|---|---|---|
| | | | Metalled roads maintained by the Public Works Department in Municipal limits. | Unmetalled roads maintained by the Public Works Department in Municipal limits. |
| 6 | 7 | 8 | 9 | 10 |
| Miles. | Miles. | Miles. | Miles. | Miles. |
| .... | 224·85 | .... | .... | .... |
| .... | 68·70 | .... | 2·00 | .... |
| (*h*) 332·80 | 731·45 | 390·35 | 6·30 | .... |
| .... | 47·00 | .... | .... | .... |
| 332·80 | 1,072·00 | 390·35 | 8·30 | .... |
| 8,034·93 | 9,504·63 | 8,720·52 | 239·63 | 9·37 |
| *1,022·97 | 81·21 | 1,025·15 | *.... | .... |
| *201·50 | .... | 201·50 | .... | .... |
| 1,098·25 | .... | 1,128·75 | .... | .... |
| 66·50 | .... | 163·60 | .... | .... |
| 2,389·22 | 81·21 | 2,519·00 | .... | .... |
| 159·37 | 42·87 | 300·87 | .... | .... |
| (*f*) 972·85 | 20·50 | 1,028·35 | .... | .... |
| (*g*) 483·10 | 8·10 | 539·55 | .... | .... |
| (*g*) 147·85 | 5·50 | 162·35 | .... | .... |
| (*g*) 284·25 | 8·30 | 299·50 | .... | .... |
| 2,047·42 | 85·27 | 2,330·62 | .... | .... |

report.

Local Board, Ahmednagar.

Board during the year.

Kotri road.

and (*d*) above.

Kotri Road and partly to some new roads having been constructed during the year.

Local authorities.

from 1st April 1932.

| Name of Circle.. | Name of Division. | Length of metalled roads maintained by the Public Works Department. | Length of unmetalled roads maintained by the Public Works Department. | Length of metalled roads maintained by the Local Authorities. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| *Sind*—contd. | | Miles. | Miles. | Miles. |
| Western Sind Circle. | .... | 12·81 | 16·62 | 3·88 |
| | Total, Western Sind Circle. | 12·81 | 16·62 | 3·88 |
| Rohri Canal Circle. | Rohri .. .. | .. | (*b*)40·47 | .... |
| | Nasrat .. .. | (*b*)1·92 | (*b*) 1·96 | (*c*)2·56 |
| | Dad .. .. | (*b*)3·84 | (*b*)71·00 | .... |
| | Hala .. .. | (*b*)6·50 | (*b*)66·16 | (*c*) 4·80 |
| | Total, Rohri Canal Circle. | 12·26 | 179·59 | 7·36 |
| Eastern Sind Circle. | Mithrao .. .. | .... | (*d*)13·00 | 1·50 |
| | Khipro .. .. | .... | 35·00 | .... |
| | Northern Jamrao .. | .... | .... | 14·50 |
| | Southern Jamrao .. | .... | (*e*)17·00 | 12·00 |
| | Total, Eastern Sind Circle. | .... | 65·00 | 28·00 |
| | Total for Sind .. | 104·93 | 674·19 | 125·86 |
| | Grand Total .. | 6,011·30 | 1,359·78 | 3,724·12 |

(*a*) The details of the roads maintained by the District Local Board were not known

(*b*) The difference from last year's figures in the lengths of roads maintained by the made by the Executive Engineers last year which have now been reconciled.

(*c*) The difference from last year's figures in the length of roads maintained by the Nawabshah, reports that due to maintenance of new property registers prepared recently,

(*d*) The decrease is due to transfer of 10 miles of the Mirpurkhas-Umarkot road to

(*e*) The increase is due to transfer of Mirpurkhas-Umarkot road from Mithrao Sind Circle.

(*f*) The increase is due to the addition of roads in the Mithi and Diplo talukas

(*g*) The decrease is due to certain lengths of roads having been transferred to the

II—*concld.*

| Length of unmetalled roads maintained by the Local Authorities. | Total length of metalled roads. | Total length of unmetalled roads. | Remarks. | |
|---|---|---|---|---|
| | | | Metalled roads maintained by the Public Works Department in Municipal limits. | Unmetalled roads maintained by the Public Works Department in Municipal limits. |
| 6 | 7 | 8 | 9 | 10 |
| Miles. | Miles. | Miles. | Miles. | Miles. |
| (*a*) 1,955·25 | 16·69 | 1,971·87 | .... | .... |
| 1,955·25 | 16·69 | 1,971·87 | .... | .... |
| (*c*) 335·50 | .... | 375·97 | .... | .... |
| (*c*) 315·43 | 4·48 | 317·39 | .... | .... |
| (*c*) 312·00 | 3·84 | 383·00 | .... | .... |
| (*c*) 360·10 | 11·30 | 426·26 | .... | .... |
| 1,323·03 | 19·62 | 1,502·62 | .... | .... |
| (*f*) 1,035·00 | 1·50 | 1,048·00 | .... | .... |
| (*g*) 1,575·00 | .... | 1,610·00 | .... | .... |
| 254·25 | 14·50 | 254·25 | .... | .... |
| 256·00 | 12·00 | 273·00 | .... | .... |
| 3,120·25 | 28·00 | 3,185·25 | .... | .... |
| 10,835·17 | 230·79 | 11,509·36 | .... | .... |
| 18,870·10 | 9,735·42 | 20,229·88 | 239·63 | 9·37 |

fully at the time of preparing last year's statement and hence the difference.

Public Works Department is due to the fact that there were some errors in the reports

Local Authorities is due to the reason that the President, District Local Board, the mileages have been changed.

the Southern Jamrao Division.

Division, and the transfer of a portion of Hyderabad-Mirpurkhas road from Southern

transferred from the Khipro Division.

Mithrao Division.

APPENDIX

*Statement showing the expenditure on Provincial Buildings and*

| 1 | 1921-22 | | 1922-23 | |
|---|---|---|---|---|
| | 41-C.W. Provincial. 2 | 60-C.W. 3 | 41-C.W. Provincial. 4 | 60-C.W. 5 |
| | Rs. | Rs. | Rs. | Rs. |
| (*i*) Expenditure on buildings for original works in the Presidency proper .. .. | 70,17,468 | .... | 18,40,250 | 21,36,237 |
| (*ii*) Do. do. Sind .. | 12,90,750 | .... | 2,77,527 | 7,11,895 |
| | 83,08,218 | | 21,17,777 | 28,48,132 |
| (*iii*) Expenditure on buildings for maintenance in the Presidency proper .. .. | 11,03,937 | .... | 13,79,087 | .... |
| (*iv*) Do. do. Sind .. | 1,64,210 | .... | 1,51,421 | .... |
| | 12,68,147 | | 15,30,508 | |
| (*v*) Expenditure on metalled Provincial roads for original works in the Presidency proper | 19,39,046 | .... | 15,22,488 | 6,94,035 |
| (*vi*) Do. do. Sind .. | 42,695 | .... | 98,466 | .... |
| | 19,81,741 | | 16,20,954 | 6,94,035 |
| (*vii*) Expenditure on unmetalled Provincial roads for original works in the Presidency proper .. .. .. | 5,00,155 | .... | 97,110 | 20,903 |
| (*viii*) Do. do. Sind .. | .... | .... | .... | .... |
| | 5,00,155 | | 97,110 | 20,903 |
| (*ix*) Expenditure on metalled Provincial roads for maintenance in the Presidency proper .. .. .. | 19,85,510 | .... | 24,27,684 | .... |
| (*x*) Do. do. Sind .. | 32,825 | .... | 17,889 | .... |
| | 20,18,335 | | 24,45,573 | |
| (*xi*) Expenditure on unmetalled Provincial roads for maintenance in the Presidency proper .. .. .. | 2,53,711 | .... | 2,35,632 | .... |
| (*xii*) Do. do. Sind .. | 95,939 | .... | 1,27,690 | .... |
| | 3,49,650 | | 3,63,322 | |

III.

*Roads in the Presidency Proper and in Sind from 1921–22 to 1932–33.*

| 1923–24 | | 1924–25 | | 1925–26 | | 1926–27 | |
|---|---|---|---|---|---|---|---|
| 41-C.W. Provincial. | 60-C.W. | 41-C.W. Provincial. | 60-C.W. | 41-C.W. Provincial. | 60-C.W. | 41-C.W. Provincial. | 60-C.W. |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 12,74,148 | 46,74,102 | 11,72,871 | 36,09,799 | 12,24,807 | 38,98,209 | 22,22,421 | 17,71,645 |
| 1,70,426 | 5,52,140 | 3,18,186 | 8,82,055 | 4,53,035 | 13,10,549 | 7,27,916 | 7,15,071 |
| 14,44,574 | 52,26,242 | 14,91,057 | 44,91,854 | 16,77,842 | 52,08,758 | 29,50,337 | 24,86,716 |
| 15,99,041 | .. | 14,69,217 | .. | 15,22,903 | .... | 15,95,217 | .. |
| 1,78,426 | .. | 1,91,990 | .. | 1,74,310 | .... | 2,06,962 | .. |
| 17,77,467 | | 16,61,207 | | 16,97,213 | | 18,02,179 | |
| 10,92,068 | 4,54,014 | 5,36,719 | 24,18,810 | 8,30,136 | 11,41,309 | 11,19,552 | 4,09,201 |
| 73,471 | .. | 26,685 | 1,39,015 | —102 | 30,035 | 11,759 | 99,541 |
| 11,65,539 | 4,54,014 | 5,63,404 | 25,57,825 | 8,30,034 | 11,71,344 | 11,31,311 | 5,08,742 |
| 72,046 | 20,943 | 63,591 | 1,14,266 | 1,36,210 | 33,048 | 2,50,893 | .. |
| 170 | .. | .... | .. | 13,043 | 20,788 | 661 | .. |
| 72,216 | 20,943 | 63,591 | 1,14,266 | 1,49,253 | 53,836 | 2,51,554 | |
| 26,69,387 | .. | 27,73,938 | .. | 28,80,514 | .... | 30,98,552 | .. |
| 16,291 | .. | 13,996 | .. | 24,444 | .... | 78,629 | .. |
| 26,85,678 | | 27,87,934 | | 29,04,958 | | 31,77,181 | |
| 2,83,378 | .. | 2,81,022 | .. | 2,53,438 | .... | 2,55,920 | .. |
| 1,36,482 | .. | 1,30,644 | .. | 1,31,892 | .... | 89,724 | .. |
| 4,19,860 | | 4,11,666 | | 3,85,330 | | 3,45,644 | |

| | 1927-28 | | 1928-29 | |
|---|---|---|---|---|
| | 41-C.W. Provincial. | 60-C.W. | 41-C.W. Provincial. | 60-C.W. |
| 1 | 14 | 15 | 16 | 17 |
| | Rs. | Rs. | Rs. | Rs. |
| (i) Expenditure on buildings for original works in the Presidency proper .. .. .. | 9,72,027 | 13,90,972 | 9,61,174 | 19,07,442 |
| (ii) Do. do. Sind .. | 3,47,891 | 3,70,005 | 2,44,881 | 3,69,562 |
| | 13,19,918 | 17,60,977 | 12,06,055 | 22,77,004 |
| (iii) Expenditure on buildings for maintenance in the Presidency proper .. | 17,04,033 | .... | 16,43,248 | .... |
| (iv) Do. do. Sind .. | 2,46,822 | .... | 2,07,847 | .... |
| | 19,50,855 | | 18,51,095 | |
| (v) Expenditure on metalled Provincial roads for original works in the Presidency proper | 7,95,102 | 5,26,052 | 7,40,068 | 5,52,195 |
| (vi) Do. do. Sind .. | 81,725 | 1,74,995 | 98,454 | 1,75,326 |
| | 8,76,827 | 7,01,047 | 8,38,522 | 7,17,521 |
| (vii) Expenditure on unmetalled Provincial roads for original works in the Presidency proper .. .. .. | 1,65,007 | .... | 1,05,960 | .... |
| (viii) Do. do. Sind .. | 12,313 | .... | 9,172 | .... |
| | 1,77,320 | | 1,15,132 | |
| (ix) Expenditure on metalled Provincial roads for maintenance in the Presidency proper | 32,12,327 | .... | 30,99,797 | .... |
| (x) Do. do. Sind .. | 57,076 | .... | 65,883 | .... |
| | 32,69,403 | | 31,65,680 | |
| (xi) Expenditure on unmetalled Provincial roads for maintenance in the Presidency proper .. .. .. | 2,82,958 | .... | 2,67,776 | .... |
| (xii) Do. do. Sind .. | 1,52,444 | .... | 1,26,654 | .... |
| | 4,35,402 | | 3,94,430 | |
| (xiii) Expenditure from Road Development Fund in connection with Provincial roads for original works in the Presidency proper. | .... | .... | .... | .... |
| (xiv) Do. do. Sind .. | .... | .... | .... | .... |
| (xv) Expenditure from Road Development Fund in connection with Provincial roads for maintenance in the Presidency proper. | .... | .... | .... | .... |
| (xvi) Do. do. Sind .. | .... | .... | .... | .... |

III—*contd.*

| 1929-30 | | 1930-31 | | 1931-32 | | 1932-33 | |
|---|---|---|---|---|---|---|---|
| 41-C.W. Provincial. | 60-C.W. | 41-C.W. Provincial. | 60-C.W. | 41-C.W. Provincial. | 60-C.W. | 41-C.W. Provincial. | 60-C.W. |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 8,88,923 | 22,83,762 | 7,15,423 | 4,32,192 | 2,38,311 | 20,397 | 2,51,734 | 1,339 |
| 3,44,517 | 1,40,963 | 2,16,733 | 1,22,058 | 3,47,375 | 5,20,146 | 1,03,412 | 5,376 |
| 12,33,440 | 24,24,725 | 9,32,156 | 5,54,250 | 5,85,686 | 5,40,543 | 3,55,146 | 6,715 |
| 15,91,742 | .. | 15,54,193 | .. | 13,73,726 | .... | 9,88,704 | .. |
| 2,88,022 | .. | 2,47,047 | .. | 1,61,565 | .... | 1,54,454 | .. |
| 18,79,764 | | 18,01,240 | | 15,35,291 | | 11,43,158 | |
| 5,81,922 | 5,41,635 | 3,07,467 | 4,85,007 | 1,39,416 | 2,91,305 | 1,26,240 | 1,55,554 |
| 7,919 | 94,001 | — 2 | 21,693 | .... | 4,716 | .... | .. |
| 5,89,841 | 6,35,636 | 3,07,465 | 5,06,700 | 1,39,416 | 2,96,021 | 1,26,240 | 1,55,554 |
| 1,11,174 | .. | 81,815 | .. | 29,564 | .... | 23,447 | .. |
| 1,400 | .. | 8,923 | .. | .... | .... | .... | .. |
| 1,12,574 | | 90,738 | | 29,564 | | 23,447 | |
| 30,95,981 | .. | 29,37,136 | .. | 28,68,480 | .... | 23,36,968 | .. |
| 96,560 | .. | 55,688 | .. | 61,862 | .... | 63,413 | .. |
| 31,92,541 | | 29,92,824 | | 29,30,342 | | 24,00,381 | |
| 2,54,990 | .. | 2,98,830 | .. | 2,30,071 | .... | 1,61,682 | .. |
| 1,57,922 | .. | 1,42,386 | .. | 82,871 | .... | 86,008 | .. |
| 4,12,912 | | 4,41,216 | | 3,12,942 | | 2,47,690 | |
| .... | .. | 3,00,076 | .. | 7,35,418 | .... | 9,06,785 | .. |
| .... | .. | .... | .. | 4,82,195 | .... | 6,51,927 | .. |
| | | 3,00,076 | | 12,17,613 | | 15,58,712 | |
| .. | .. | .... | .. | .... | .... | 13,078 | .. |
| .. | .. | .... | .. | .... | .... | 500 | .. |
| | | | | | | 13,578 | |

APPENDIX

*Statement showing the expenditure on District Local Board Roads in the year 1921-22*

| 1 | 1921-22.* 2 | 1922-23. 3 | 1923-24. 4 | 1924-25. 5 |
|---|---|---|---|---|
| | Rs. | Rs. | Rs. | Rs. |
| (1) Expenditure on metalled District Local Board roads for original works in the Presidency proper .. | 1,80,641 | 2,11,788 | 2,45,635 | 1,85,618 |
| (2) Expenditure on metalled District Local Board roads for original works in Sind .. .. .. | 16,103 | 5,039 | 14,611 | 10,279 |
| | 1,96,744 | 2,16,827 | 2,60,246 | 1,95,897 |
| (3) Expenditure on unmetalled District Local Board roads for original works in the Presidency proper .. | 1,60,724† | 94,250 | 1,28,734 | 1,17,791 |
| (4) Expenditure on unmetalled District Local Board roads for original works in Sind .. .. | 98,877 | 42,321 | 49,660 | 40,897 |
| | 2,59,601 | 1,36,571 | 1,78,394 | 1,58,688 |
| (5) Expenditure on metalled District Local Board roads for maintenance in the Presidency proper .. | 4,51,946 | 5,68,794 | 5,44,584 | 5,68,349 |
| (6) Expenditure on metalled District Local Board roads for maintenance in Sind .. .. | 7,455 | 4,924 | 2,901 | 8,951 |
| | 4,59,401 | 5,73,718 | 5,47,485 | 5,77,300 |
| (7) Expenditure on unmetalled District Local Board roads for maintenance in the Presidency proper .. | 5,18,795 | 4,55,687 | 5,30,217 | 4,92,900 |
| (8) Expenditure on unmetalled District Local Board roads for maintenance in Sind .. .. | 2,85,820 | 2,41,091 | 2,89,435 | 2,64,811 |
| | 8,04,615 | 6,96,778 | 8,19,652 | 7,57,711 |
| (9) Expenditure on metalled and unmetalled District Local Board roads (original works and repairs) in the Ratnagiri District not included above .. .. | 37,924 | 22,043 | 30,365 | 30,598 |
| (10) Expenditure on metalled and unmetalled District Local Board roads (original works and repairs) in the Bijapur District not included above .. .. | .. | .. | .. | .. |

*The figures in column 2 against items (1), (3), (5) and (7) do not include those

†This figure does not include the expenditure in the West Khandesh District as

IV

*Presidency proper and Sind (original works and repairs) from the to 1932-33.*

| 1925-26. 6 | 1926-27. 7 | 1927-28. 8 | 1928-29. 9 | 1929-30. 10 | 1930-31. 11 | 1931-32. 12 | 1932-33. 13 |
|---|---|---|---|---|---|---|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 2,22,685 | 2,14,017 | 2,98,423 | 3,20,532 | 4,11,234 | 3,07,573 | 2,69,334 | 1,92,344 |
| 73,201 | 1,33,542 | 77,391 | 1,54,304 | 76,837 | 49,194 | 45,765 | 38,162 |
| 2,95,886 | 3,47,559 | 3,75,814 | 4,83,836 | 4,88,071 | 3,56,767 | 3,15,099 | 2,30,506 |
| 1,78,703 | 2,97,654 | 3,18,374 | 2,72,491 | 2,62,260 | 2,28,956 | 1,86,361 | 2,13,520 |
| 78,637 | 92,034 | 85,337 | 40,952 | 21,352 | 39,817 | 18,636 | 23,488 |
| 2,57,340 | 3,89,688 | 4,03,711 | 3,13,443 | 2,83,612 | 2,68,773 | 2,04,997 | 2,37,008 |
| 6,21,726 | 7,48,360 | 7,59,703 | 8,51,468 | 8,73,140 | 9,31,651 | 8,81,092 | 7,66,140 |
| 3,205 | 2,073 | 5,405 | 12,652 | 36,856 | 50,441 | 11,757 | 9,869 |
| 6,25,021 | 7,50,433 | 7,65,108 | 8,64,120 | 9,09,996 | 9,82,092 | 8,92,849 | 7,76,009 |
| 6,36,110 | 6,79,365 | 5,91,524 | 4,57,202 | 3,51,071 | 4,62,352 | 3,36,981 | 3,36,929 |
| 4,00,788 | 3,88,198 | 4,41,126 | 4,57,168 | 4,34,781 | 4,44,139 | 3,58,065 | 3,06,622 |
| 10,36,898 | 10,67,563 | 10,32,650 | 9,14,370 | 7,85,852 | 9,06,491 | 6,95,046 | 6,43,551 |
| 46,983 | 36,010 | 38,379 | 41,785 | 57,594 | .... | .... | .. |
| .... | .. | .... | .. | 92,233 | .... | .... | .. |

for the Sholapur District as the Commissioner reports that they are not available.
the Commissioner reports that the information is not available.

APPENDIX

*Statement showing expenditure on establishment in the Roads and Buildings and percentage on the total outlay on works and*

| Year | Expenditure on Establishment in the Roads and Buildings Branch | | | | | | |
|---|---|---|---|---|---|---|---|
| | 41—Civil Works—Provincial (Transferred and Reserved) | 60—Civil Works | 41—Civil Works—Central | 50—Military Works | Deposit Works | Total | Percentage on the total outlay on works and repairs in the Roads and Buildings Branch |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | |
| 1921-22 .. | 29,06,955 | .. | 1,96,683 | 45,258 | 2,84,992 | 34,35,888 | 19·26 |
| 1922-23 .. | 20,14,640 | 8,34,450 | 1,78,163 | 71,481 | 77,143 | 31,75,877 | 20·79 |
| 1923-24 .. | 15,84,488 | 8,10,645 | 67,892 | 38,560 | 6,88,354 | 31,89,939 | 19·88 |
| 1924-25 .. | 16,89,892 | 12,25,632 | 1,19,721 | 27,802 | 2,52,556 | 33,15,663 | 19·67 |
| 1925-26 .. | 18,89,417 | 12,05,078 | 1,01,876 | 69,049 | 2,58,535 | 35,23,955 | 20·66 |
| 1926-27 .. | 25,30,286 | 5,97,486 | 1,68,896 | 5,882 | 3,94,389 | 36,96,939 | 23·76 |
| 1927-28 .. | 21,99,448 | 5,59,107 | 1,49,132 | 5,042 | 2,97,270 | 32,09,999 | 24·96 |
| 1928-29 .. | 22,40,393 | 6,56,713 | 2,29,540 | 2,240 | 2,56,180 | 33,85,066 | 25·03 |
| 1929-30 .. | 22,45,450 | 7,33,867 | 1,56,773 | 3,638 | 2,34,897 | 33,74,625 | 25·26 |
| 1930-31 .. | 25,51,711 | 1,80,139 | 1,72,163 | 2,415 | 85,444 | 29,91,872 | 32·35 |
| 1931-32 .. | 25,93,104 | 2,32,929 | 1,22,799 | 3,182 | 44,132 | 29,96,146 | 38·70 |
| 1932-33 .. | 23,74,603 | 71,981 | 85,143 | 3,334 | 17,156 | 25,52,217 | 39·79 |

*NOTE.*—The percentage of the establishment charges on the cost of works and repairs in the (column 8). The reason is largely that the establishment charges in the Irrigation Branch include certain canal systems in Sind and the Deccan which has no connection with the execution of works spent on revenue management including the *control and distribution of water*, which is debited in the ment charges debited in the accounts to "revenue management" are deducted from the total cost so divergent. The increase in the rate per cent. in the R. & B. Branch is mainly due to decrease in which expenditure on works is reduced. A more overall percentage on expenditure on works is

V.

*the Irrigation Branches of the P. W. D. from the year* 1921–22 *to* 1932–33 *and repairs during that period in both the Branches.*

| Expenditure on Establishment in the Irrigation Branch | | | | | | Total Establishment charges in the Roads and Buildings and Irrigation Branches | Percentage on the total outlay of works and repairs in Roads and Buildings and Irrigation Branches |
|---|---|---|---|---|---|---|---|
| 55—Construction of Irrigation, Navigation, Embankment and Drainage Works | XIII-Works for which capital accounts are kept | 15—Other Revenue Expenditure financed from Ordinary Revenues | Deposit Works | Total establishment charges | Percentage on the total outlay on works and repairs in the Irrigation Branch | | |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Rs. | Rs. | Rs. | Rs. | Rs. | | Rs. | |
| 11,53,734 | 13,85,960 | 6,68,651 | 2,770 | 32,11,115 | 33·59 | 66,47,003 | 24·26 |
| 14,20,751 | 13,44,901 | 5,34,327 | 1,993 | 33,01,972 | 32·22 | 64,77,849 | 25·38 |
| 21,87,793 | 14,43,222 | 4,32,013 | 2,056 | 40,65,084 | 33·89 | 72,55,023 | 25·87 |
| 29,10,785 | 17,37,724 | 5,26,361 | 492 | 51,75,362 | 28·73 | 84,91,025 | 24·35 |
| 32,21,647 | 17,99,343 | 5,19,228 | 2,681 | 55,42,899 | 21·62 | 90,66,854 | 21·23 |
| 35,56,959 | 18,08,385 | 5,94,989 | 3,207 | 59,63,540 | 30·56 | 96,60,479 | 27·54 |
| 36,98,956 | 19,20,773 | 7,80,312 | 3,847 | 64,03,888 | 26·00 | 96,13,887 | 25·64 |
| 39,04,670 | 21,35,939 | 6,16,601 | 2,750 | 66,59,960 | 25·51 | 1,00,45,026 | 25·35 |
| 42,26,873 | 21,08,302 | 6,18,812 | 1,012 | 69,54,499 | 23·26 | 1,03,29,124 | 23·88 |
| 42,88,966 | 18,31,149 | 5,99,621 | 1,734 | 67,21,470 | 21·60 | 97,13,342 | 24·06 |
| 40,37,972 | 16,34,011 | 5,18,627 | 86 | 61,90,696 | 22·40 | 91,86,842 | 25·97 |
| 28,70,427 | 23,53,971 | 4,01,329 | 680 | 56,26,407 | 28·54 | 81,78,624 | 31·30 |

Irrigation Branch (column 14) is generally higher than that in the Roads and Buildings Branch the cost of Special Revenue Establishment employed entirely on "revenue management" work on and repairs, and that these charges also include cost of part of the time of Irrigation establishment accounts to "revenue management" and not to execution of works and repairs. If these establish- of establishment in the Irrigation Branch the percentage on the cost of works and repairs will not be outlay on "works" and "repairs". Establishment charges cannot be reduced in the same ratio in inaccurate.

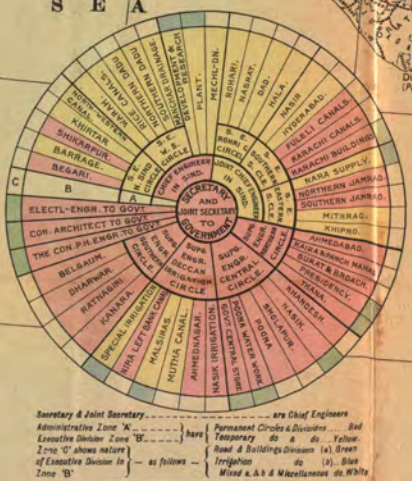
# BOMBAY PRESIDENCY

## PUBLIC WORKS DEPARTMENT

## DIVISION MAP

1932-33

Scale – 105 Miles to 1 Inch.



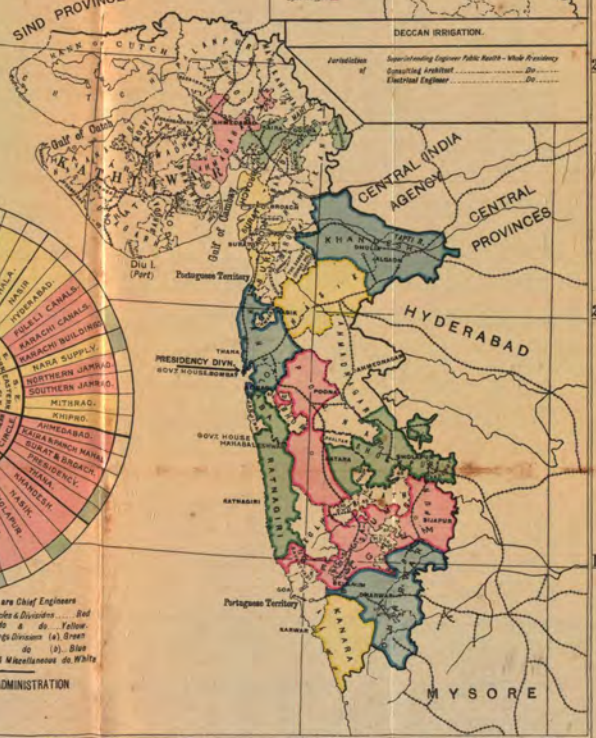

Secretary & Joint Secretary ..... are Chief Engineers

Administrative Zone 'A' ..... Red
Executive Division Zone 'B' ..... Yellow.
Zone 'C' shows nature of Executive Division in Zone 'B' — as follows —
Permanent Circles & Divisions ..... Red
Temporary do & do ..... Yellow.
Road & Buildings Division (a). Green
Irrigation do (b). Blue
Mixed a. & b & Miscellaneous do. White

DIAGRAM SHOWING PUBLIC WORKS DEPARTMENT ADMINISTRATION

DECCAN IRRIGATION.

Jurisdiction of Superintending Engineer Public Health – Whole Presidency
Consulting Architect ..... Do.....
Electrical Engineer ..... Do.....



gitized with financial assistance from th
Government of Maharashtra
on 22 July, 2017

# MAP OF SIND

## SHOWING

## PUBLIC WORKS DEPARTMENT DIVISIONS

1932-33

*Scale 50 Miles = 1 Inch.*

S.P.S.D. Press, 1934.